Ph.D. in MUSIC EDUCATION

MUSICAL DEVELOPMENT: TESTING A MODEL IN THE AUDIENCE-LISTENING SETTING

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1993

A dissertation submitted in fulfilment of the requirements for the degree of Ph.D. at the Institute of Education University of London

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ABSTRACT

The purpose of this work has been to investigate if responses made through listening in audience can be mapped according to the Swanwick and Tillman Spiral of Musical Development. The first part of chapter one consists of a review of previous studies in the field of musical abilities, aptitudes, musical development and the assessment of listening in audience. The second part of the chapter tries to outline the Spiral Theory of Musical Development, its theoretical background and assessment criteria.

Chapter two attempts to critically discuss the developmental adequacy of the Spiral Theory, by employing five general developmental characteristics named as Temporality, Cumulativity, Directionality, New Mode of Organization, and Increased Capacity for Self-Control. The first part of chapter three discusses in a critical way the terms in which musical development has been conceived as being analogical to Piaget's Theory on Play Development in early childhood. The second part of the chapter attempts to extend Swanwick's analogy by offering a critical analysis of the Spiral phases in relation to assimilation and accommodation processes. Finally, the third part discusses the generalization of the analogical psychological process to the remaining

activities of performing and listening in audience.

Chapter four outlines the method employed to assess listening in audience responses, which consisted of interviewing a total of hundred and five children in two field studies by using two kinds of interview - structured and semi-structured. Chapter five offers the results of the Pilot Study carried out in Brazil, as well as offering an evaluation of research procedures. The first part of chapter 6 presents a revised research method employed in the final field work that was carried out in England. The second part of the chapter presents the results and interpretation of the field work. Chapter seven presents the conclusion and some implications for the Spiral Theory, research development and music education.

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ACKNOWLEDGEMENTS

The present work has been concluded thanks to the help and comprehension of some people as well as institutions directly involved. First I would like to thank the Brazilian government agency CAPES for its financial support that made it possible for me to remain in England for three academic years. Second, I would like to thank all members of the music department staff, as well as colleagues such as Mary Shiobara and Mary Lenon for their friendship and support. Thanks to Dr. Terezinha Nunes for her careful advise on the psychology section of this work. Special thanks to my friends Dr. Ley and Suzi Sander who kindly offered their computer and printer for the final conclusion of this work, and to Preston Scanlon for the revision of the English part of the work.

I would also extend my very special thanks to two very important Brazilian friends, Normelio and Ignez Deppe, who were always concerned with my well-being during the time I lived in England. I could not forget to deliver a special thanks to Dr. Maria Figueiredo-Cowen, who followed my work throughout those years, always making sure that I had all logistical and emotional support to continue my studies.

Thanks to special friends such as Liz Behr Siqueira,

Jane and Kevin Gilmore, Rita Testa, Geraldo Raupp, and Sonia Bortholuzzi who in one way or another offered me strong support and encouragement and helped me to stay on when times seemed difficult.

I could not forget to thank my parents Walter and Francisca Hentschke for having taught me to pursue my personal and professional goals, no matter how difficult they were to realize.

Finally, I would like to dedicate my thesis to two very special people who more than anyone else followed my work very closely. To Professor Keith Swanwick, to whom I present my greatest gratitude and admiration for being not only such a great and committed music educator but also for being an excellent supervisor and a special friend. To Flavio Deppe, who has been someone who has followed the long years of my personal and professional achievements. Thanks for standing beside me during such an important part of my life.

INTRODUCTION

The domain of "listening" is the only one that permeates any experience one may have with music. Its indispensable as well as subjective character makes listening to music, one of the most intriguing and perhaps difficult areas to be researched. For many years psychologists and music educators alike have been trying to solve the problem by creating new methods where everyone seems to claim a new degree of validity and reliability.

The problems surrounding the assessment of musical understanding through listening in audience are certainly quite distinct from the problems of assessing composing and performing activities. In the case of composing and performing there is a so called 'objective' musical product, as opposed to listening in audience that requires a translation from the subjective experience to an objective dimension. What constitutes the 'musical product', is not the listening itself, but rather a sub-product of the whole listening experience, being those represented by words, cards, drawings, among others.

Historically it can be said that there was and still is a tendency to revert to the psychological field to find out about objective answers to the process of experiencing music. This cannot be said to be all

satisfactory, especially as far as early studies are concerned. This may be due to the fact that psychological studies offer us a limited way of looking at specific experience. The proponents of the scientific method in the investigation of the process of musical experience are forced to delimitate the scope of their investigation. This attitude may be clearly exemplified by the attempts to measure one's degree of musical ability or how capable one is of perceiving rhythmic or melodic patterns and so on.

This psychological tradition brought with it the separation of musical experience into specific abilities and skills, which resulted in a fragmentation of the experience itself. As a matter of pursuing a thorough investigation of the psychological process involved, one may suppose that it could not be approached otherwise. However, those studies may lose the broader perspective of the overall dimensions of music and how we experience them. The opposite may also be true, that in order to broaden our understanding of musical experience, the division into specific 'abilities' seems an inevitable path to be taken. What remains to be asked is how far the research carried out in the field of psychology of music has been beneficial to music education, in the sense of developing new means of assessing musical understanding.

It was with this problem in mind that the present

work had its beginning. Through a quite extensive review of the literature involving the field of music education and psychology of music, it is possible to realise that there seems to be a lack of integration of both fields of study - psychology of music and music education.

On one hand the field of psychology of music is more concerned with finding out how and what people are able to perceive, and not with the establishment of 'a priori' criteria. Many of its assessment methods and instrumentation have been used in music education, for example, tests of musical ability and aptitude . On the other hand, for music education, the problem of assessing audience-listening worsens since there are very few studies which are concerned with the establishment of clear criteria through which children's musical responses can be assessed. Thus besides the methodological problems, music education faces a theoretical one, i.e. a theory capable of depicting the fundamental dimensions by which we listen to music. This is reflected in the lack of clear criteria on which the assessment can be based. It seems that there would be no point in having valid and reliable methods if there are no clear criteria based on musical knowledge itself.

The aim of the present work is not only to search for new methods of assessing one's musical understanding through listening in audience, but also to search for

clear criteria based on musical knowledge. For this reason the present work chose Swanwick's[1] Spiral Theory of Musical Development as its theoretical framework. Presently, this theory stands as the first one to offer a comprehensive view of what the author calls 'the dimensions of musical criticism', through which one responds to music. The attempt of this theory to base its theoretical foundations on psychological and developmental principles enables the establishment of clear criteria on which musical understanding can be assessed through the three practical activities - composing, performing, and listening. What makes Swanwick's theory unique in this context is that its criteria are based not only on the dimensions of musical criticism, but also on a developmental approach.

Instead of taking the Spiral Theory as it stands today, and thus accepting its theoretical propositions, the present work attempts to challenge some of its basic principles with regard to its developmental adequacy as well as the feasibility of its psychological background, in this case the use of Piaget's theory on development of play in early childhood.

The critical discussion of the Theory's basic premises seems to be of paramount importance bearing in mind that a model arises from the theoretical assumptions

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[1] Swanwick, K. (1988). Music, mind, and education. London: Routledge.

- the Spiral - through which children's musical understanding can be assessed. So far, the Spiral sequence has depended only on the evidence of children's composition. Thus one of the aspects that remains to be investigated is whether responses made through listening in audience can be mapped according to Swanwick and Tillman's Spiral Model of Musical development.

In order to answer this question, the second part of the present work attempts to develop a new multi-instrumental method to assess children's musical understanding through listening in audience. The rationale is mainly based on the idea that there is a need to stand away from the traditional psychometric approaches, where in many cases only one instrument of assessment is employed, (e.g. questionnaires), and only one ability is looked at. Thus, the research carried out employs the interview technique in two of its basic forms - structured and semi-structured. As part of the structured interview, the present work employed four basic assessment tools - colour and figure cards, repertory grid technique, and drawing. The semi-structured interview section consisted of assessing children's level of musical understanding through verbal means of responding to music.

The empirical work has been carried out in two different social settings. The first one, the Pilot Study,

was carried out in Brazil, with children who had never had any structured contact with music (no formal music education in schools). The second field work study was carried out in England with children who do have music education as part of their formal education. Due to the nature of both population samples it is possible to raise another important issue which should concern music educators and education authorities in general - the influence of music education on the development of musical understanding. This stands as a complimentary discussion since it does not constitute the main focus of this thesis.

CHAPTER 1: LISTENING IN AUDIENCE AND MUSICAL DEVELOPMENT

1.1 - STUDIES IN MUSICAL ABILITY, DEVELOPMENT AND THE ASSESSMENT OF LISTENING IN AUDIENCE

In order to find out what is available in terms of musical ability and musical development studies this chapter will review a range of studies and research carried out in the field of listening in audience and musical development. The literary sources used in the present review consist of both primary and secondary sources. The latter consists of well-established reviews such as Hargreaves,[1] Shuter-Dyson and Gabriel,[2] Sloboda,[3] Bullock,[4] among others. Due to the vast amount of studies and research carried out in this area, it would be impossible to mention every single work, or the variety of classifications of these works proposed in different reviews. Nonetheless the works presented here exert a major influence on the development of the theoretical framework and research design.

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[1] Hargreaves, D.J. (1986). The developmental psychology of music. Avon: Cambridge University Press.

[2] Shuter-Dyson, R. and Gabriel, C. (1981). The psychology of musical ability. (2nd ed). London: Methuen.

[3] Sloboda, J.A. (1985). The musical mind: the cognitive psychology of music. Oxford: Oxford University Press.

[4] Bullock, W.J. (1973). A review of measures of musico-aesthetic attitude. Journal of Research in Music Education, 21, 331-44.

Despite recognising that "listening" permeates every musical experience (e.g. composing and performing), the present study does contemplate one form of listening, that of *listening in audience*, as independent from composing and performing. Authors such as Loane do not agree with the above classification of music activities (e.g. composing, performing and listening), suggesting that "it may be an inadequate way to categorise musical activities, particularly because any musical activity is a sort of listening."[5] This assertion is undisputable, though the consequences of the position could not be more controversial. Without intending to criticise every point made by Loane, there is one which bears a close relationship to the present study.

When Loane asserts that "audience-listening as such *cannot be assessed*,"[6] he is ignoring the fact that people may display greater musical understanding through listening in audience than through composing or performing, and that this understanding may be crucial for the way people relate to music. It is beyond dispute that the three ways to relate to music (composing, performing, and listening), are qualitatively different and that musically speaking, the end products of composing and performing are more easily assessed. On the

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[5] Loane, B. (1984). On 'Listening' in music education. British Journal of Music Education, 1, 1, 27-36. p. 27.

[6] Ibid., p. 31.

other hand, if there was a clear criterion in terms of the epistemological foundations of musical understanding, such a problem might be overcome. According to Loane the only way to experience music is through composing and performing, where listening is an inevitable part of the experience. If listening to music cannot be assessed, how can one know or understand what kind of musical experience people are having?

Despite the fact that listening in audience is a "private experience", research has demonstrated a certain trend in terms of responses, i.e. that there is a level of agreement in terms of how people respond to specific music in a specific cultural context. The present work subscribes to the view that musical understanding can be assessed through listening in audience, because some individuals may 'hear' more and have greater musical understanding than what they are able to express through composing and performing.

The problem of assessing listening in audience is recognised in the psychology of music literature by many authors such as Sloboda,[7] Hargreaves,[8] and others, to be one of the most complicated forms of musical experience to test. This is mainly due to its high degree of subjectivity allied with the dependency on verbal

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[7] Sloboda, J.A. (1985). op. cit.

[8] Hargreaves, D.J. (1986). op. cit.

expression as a source of answer measurement. One has to realise that any testing of musical listening or perception is a potential problem, considering that our instruments of measurement are still based on an objective principle, therefore making necessary the 'translation' of the subjective into an objective compound.

The same can certainly not be said about composing and performing where there is an observable end-product. While composing and performing activities offer the observer a possibility of relating 'objectively' towards their musical product, listening products remain, as Sloboda says, "a series of fleeting, largely incommunicable mental images, feelings, memories, and anticipations."[9] On the other hand there are means of finding out the kinds of mental images, feelings and even anticipations as is demonstrated in much research so far. There are 'tangible' musical elements to be assessed through listening, or at least elements which denote a specific level of musical understanding.

It could be said that, so far, most research within the field of psychology of music and more specifically within how people respond to music contains an attempt to uncover the psychological processes involved in experiencing music. It is also true that every piece of

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[9] Sloboda, J.A. (1985). op. cit., p. 151.

research carried out has, implicitly or explicitly, an underlying theory of what constitutes musical knowledge and understanding. This is confirmed by Wapnick, in his review of research on attitude and preference, where he states that different approaches represent different theoretical and methodological viewpoints.[10] Thus, if an analysis of research into musical response through listening in audience is to be pursued, one has to concentrate not only on what is intended to be measured (what are the range of research questions?), but also on how people measure (what are the methods employed to obtain the answers?), and the kind of musical stimulus employed.

Hargreaves points out that "most psychological studies of responses to music have adopted a microscopic, laboratory-based approach to specific musical or quasi-musical stimuli ...".[11] He also mentions two distinct approaches to research on responses to music, named: "Naturalistic" and "Experimental".[12] This categorisation relates mainly to the controversial fact of whether or not the materials used in tests and experiments should consist of real-life music (naturalistic), or non-musical materials such as isolated sounds, chords or even electronic generated sounds (experimental).[13]

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[10] Wapnick, J. (1976). A review of research attitude and preference. Council for Research in Music Education, 48, 1-20. p. 1.

[11] Hargreaves, D.J. (1986). op. cit., p. 105.

[12] Ibid., p. 109.

[13] Ibid., p. 26.

The methodological advantages and disadvantages of both approaches are quite clear. The first one offers the clear advantage of using the 'right stimulus' (real music), and from there on being closer to a real life situation (people listen to music, rather than to isolated sounds). The disadvantage lies in the complexity of the stimulus, and the way in which it is employed is shaped by the kind of research question. The second one offers the advantage of a precise control and manipulation approach which has characterised the majority of musical ability and aptitude tests. The disadvantage is also quite clear. Since the testing situation is distanced from what one normally experiences (real music), the use of isolated sounds seems inadequate.

Without intending to denigrate studies that use musical materials rather than 'real music', one could argue that unless people are exposed to real music very little can be concluded of how they relate or experience music in a holistic sense. On the other hand studies which investigate the development of particular skills can shed light on our understanding of how eventually one makes sense of a musical discourse.

As already mentioned, listening is an activity which permeates the remaining activities or ways of relating to music. That is why it became one of the main channels to

assess people's musical ability dating as early as 1880 when Stumpf devised some tests similar to those given by music teachers.[14]

The Seashore Measures of Musical Talents of 1919 were the first standardised tests of musical ability to be published and in 1939 were again published in a revised edition where a number of subtests were reduced. Seashore's intentions were to measure basic capacities for music, these consisting of the capacity to discriminate pitch, level of loudness, rhythmic patterns, duration, timbre, and tonal memory.[15] The basic method produced a series of independent tests, where for example, people were asked which of the two tones is the lower one. The way of assessing responses was through paper and pencil answers. The subjects were not asked to sing back tones or recall rhythmic patterns.

Following Seashore's tradition of testing musical abilities, came tests such as Kwalwasser-Dykema Music Tests,[16] The Drake Music Tests,[17] The Oregon and Indiana-Oregon Discrimination Tests,[18] The Wing

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[14] Shuter-Dyson, R. and Gabriel, C. (1981). op. cit., p. 14.

[15] Ibid.

[16] Kwalwasser, J. and Dykema, P. (1930). Kwalwasser-Dykema music tests. New York: Carl Fisher.

[17] Drake, R.M. (1933). Four new tests of musical talent. Journal of Applied Psychology, 17, 136-47.

[18] Hevner, K. (1931). A study of tests for appreciation of music. Journal of Applied Psychology, 15, 575-83.

Standardised Tests of Musical Intelligence,[19] The Bentley Measures of Musical Ability,[20] among others. The common feature of these tests is the fact that their aim is to evaluate the listener's capacity to perceive the musical phenomena in its different elements, e.g. pitch, rhythm, dynamics, and so on. The musical stimuli used in these tests consisted of isolated tones and rhythmic patterns.

The Drake Music Tests were the first to employ what Hargreaves[21] called 'real music', due to its attempt to measure interval discrimination, retentivity, intuition and musical memory.[22] Among those who also start to employ 'real-music', are The Wing Standardised Tests of Musical Intelligence,[23] The Gordon Musical Aptitude Profile,[24] and The Oregon and Indiana-Oregon Discrimination Tests.[25] The latter being one of the first to employ compositions from accepted composers as musical stimuli.

The tests listed so far are part of the list of

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[19] Wing, H.D. (1960). Manual for standardised tests of musical intelligence. Windsor: National Foundation of Educational Research Publication.

[20] Bentley, A. (1966). Musical ability in children and its measurements. London: Harrap.

[21] Hargreaves, D.J. (1986). op. cit.

[22] Shuter-Dyson, R. and Gabriel, C. (1981). op. cit.

[23] Wing, H.D. (1960). op. cit.

[24] Gordon, E. (1965). Musical aptitude profile manual. Boston: Houghton Mifflin.

[25] Hevner, K. (1931). op. cit.

standardised tests and have been widely used in music schools for many years. Shuter-Dyson and Gabriel,[26] present a review of those tests according to their validity and reliability. It is possible to observe that the validity and reliability of the tests varies among themselves and sometimes among the sub-tests. The Kwalwasser-Dykema Music Tests is one example of a set of tests which present a reliability lower than some Seashore tests, and a validity open to doubt.[27] On the other hand the Gordon Musical Aptitude Profile presents a high reliability and promising validity.[28]

The Colwell Music Achievement Tests,[29] and The Iowa Tests of Music Literacy,[30] are part of the second category of tests. These are the so-called "musical achievement" tests, which were designed "to assess the individual's knowledge or attainments in music, such as performance skills, or understanding of musical theory."[31] What distinguishes them from the early musical ability tests is, first the use of more 'real-music' as a musical stimuli and, second the fact that their concern goes beyond the mere measure of the perception of musical

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[26] Shuter-Dyson, R. and Gabriel, C. (1981). op. cit.

[27] Ibid., p. 19.

[28] Ibid. p. 27.

[29] Colwell, R. (1970). Music achievement tests. Chicago: Follett.

[30] Gordon, E. (1971). Iowa tests of music literacy. Iowa City: Bureau of Educational Research and Service, University of Iowa.

[31] Hargreaves, D.J. (1986). op. cit., p. 25.

materials (timbre, level of loudness, etc.), but aim to assess an individual's understanding of musical notation as well as more elaborated forms of musical structure, e.g. major-minor discrimination and feeling for tonal centre.[32]

The range of tests described so far focus on testing an individual's ability to discriminate musical materials, meaning timbre, loudness, duration and pitch. However there are some tests which contemplate another level of responses, expressive characterisation, or as Bullock[33] names it a "musico-aesthetic attitude." Among those are the Standifer Music Perception Test,[34] and the Taylor Test of Dramatic Feeling.[35] The latter aims to find out how subjects respond to dramatic situations such as mood, scene or activity. According to Bullock, tonal measures of attitudinal response are in general "the most aesthetically oriented tests because they call for one's affective reactions to actual musical stimuli,"[36] meaning elements such as sensitivity and extramusical associations, preference for excerpts of diverse merit, preference for various musical styles, multiple,

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[32] Shuter-Dyson, R. and Gabriel, C. (1981). op. cit., p. 289.

[33] Bullock, W.J. (1973). op. cit., p. 331.

[34] Standifer, J.A. (1970). Effects on aesthetic sensitivity of developing perception of musical expressiveness. Journal of Research in Music Education, 18, 112-25.

[35] Taylor, C.H. (1963). Techniques for the evaluation of musical status. Journal of Research in Music Education, 11, 55-62.

[36] Bullock, W.J. (1973). op. cit., p. 339.

predetermined attributes of appreciation, along with clinical diagnosis and counselling.[37]

Another set of tests is those which concern the measurement of responses in terms of form, and where some of them, such as the Shultz Test of Listening Power in Music,[38] assume that "factual knowledge of mode, tempo, form, and thematic development contribute to the musico-aesthetic attitude."[39] The Mueller Music Perception Test, is another example of a test which intends to measure responses in terms of form, structure, instrumentation, rhythm[40] using real music as musical stimuli, and research instruments such as questionnaires and rating scales. There are also tests such as the Bailey Test of Listening Skill,[41] which attempt to measure responses of different dimensions such as tonality, texture, media, melody, rhythm, structure, style and expressive devises.

More recent research into listening in audience has included works on the development aspect of responses where different dimensions such as affect interpretation

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[37] Ibid., p. 339.

[38] Schultz, E.J. (1933). Testing listening power in music. Music Supervisors National Conference Yearbook, 306-12.

[39] Bullock, W.J. (1973). op. cit., p. 334.

[40] Mueller, K.H. (1956). Studies in music appreciation. Journal of Research in Music Education, 4, 3-25. p. 40.

[41] Bailey, B.E. (1968). The development and validation of a test of listening skill. Journal of Research in Music Education, 16, 59-63.

in music,[42] development of children's musical representation,[43] development of perception of musical style,[44] and the development of aesthetic reaction to music,[45] were investigated. Some of the methods employed in the above research include repertoire grid technique,[46] schematic drawings where children had to choose cards which depicted the emotional state felt when listening to the music and analysis of children's musical representation, among others.

There is another category of research concerned with the age-related development of different elements and dimensions of musical understanding through different activities. Hargreaves, mentions that research in the field of musical development is,

> patchy and rather piecemeal; some topics have been investigated in much more detail then others. In a sense, much of this work has been fairly atheoretical; the emphasis has been on the collection of normative data about musical development rather than on any consistent explanation of it.[47]

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[42] Dolgin, K. and Adelson, E. (1990). Age changes in the ability to interpret affect in sung and instrumentally-presented melodies. Psychology of Music, 18, 1, 87-98.

[43] Davidson, L. and Scripp, L. (1988). Young children's musical representations: windows on music cognition, in Generative Processes in Music, ed. J. Sloboda. Oxford: Clarendon Press.

[44] Gardner, H. (1973b). Children's sensitivity to musical styles. Merrill-Palmer Quarterly, 19, 67-77.

[45] Hargreaves, D.J (1982). The development of aesthetic reactions to music. Psychology of Music, Special Issue, 51-4.
Gilbert, L. (1990). Aesthetic reaction in music: an experiment in the use of personal construct theory. British Journal of Music Education, 7, 3, 173-90.

[46] Ibid.

[47] Hargreaves, D.J. (1986). op. cit., p. 60.

This is mainly due to the fact that musical experience as such has been divided into a series of specific skills; a tradition perhaps inherited from the early studies into musical ability. Thus, under the umbrella of musical development research one finds studies of the "development of ability to maintain a steady beat"[48] (Petzold,[49] Thackray[50]), the ability to reproduce rhythmic patterns Stanback,[51] Gardner,[52] Petzold,[53] Rosenbuch and Gardner,[54] where the ability to reproduce rhythmic patterns were found to improve after ages 9 and 11 years.

Within the development of melodic skills it is possible to find research which concentrates its attention on pitch discrimination,[55] where traditional musical ability tests were used, e.g. Bentley[56] and

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[48] Shuter-Dyson, R. and Gabriel, C. (1981). op. cit., p. 13.

[49] Petzold, R.G. (1966). Auditory perception of musical sounds by children in the first six grades. Cooperative Research Project No. 1051: University of Wisconsin.

[50] Thackray, R. (1972). Rhythmic abilities in children. London: Novello.

[51] Stanback, M. (1960). Le probleme du rythme dans le developpement de l'enfant et dans les dyslexies d'evolution. Enfance, 4, 480-502.

[52] Gardner, H. et.al. (1971). Children's conception of the arts. Journal of Research in Music Education, 19, 355-60.

[53] Petzold, R.G. (1966). op. cit.

[54] Rosenbuch, M.H. and Gardner, D.B. (1968). Reproduction of visual and auditory rhythm patterns by children. Perception and Motor Skills, 26, 1271-276.

[55] Sergeant, D.C. and Boyle, J.D. (1980). The effect of task structure on pitch discrimination. Psychology of Music, 8, 2, 3-15.

[56] Bentley, A. (1966). op. cit.

Colwell,[57] to compare the performance of children age 11 to 12 years. Still within the development of melodic skills there are important studies on the development of melodic memory such as Zenatti,[58] and Taylor.[59]

Studies on the development of a sense of tonality have also received attention by authors such as Barlett and Dowling,[60] Imberty,[61] Brehmer,[62] Reimers,[63] and Teplov.[64] Some important conclusions have been drawn from those works; among them, the fact that "before the age of 6 the child perceives a tune as complete as soon as the music stops, regardless of the note on which it ends."[65] No less importantly than the above findings are the claims that acculturation plays an important role in the process of the acquisition of tonality.[66]

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[57] Colwell, R. (1970). Music achievement tests. Chicago: Follett.

[58] Zenatti, A. (1969). Le developpement genetique de la perception musicale. Paris: C.N.R.S.

[59] Taylor, S. (1973). Musical development of children aged seven to eleven. Psychology of Music, 1, 44-9.

[60] Bartlett, J.C. and Dowling, W.J. (1980). The recognition of transposed melodies: a key-distance effect in developmental perspective. Journal of Experimental Psychology: Human Perception and Performance, 6, 500-15.

[61] Imberty, M. (1969). L'acquisition des structures tonales chez l'enfant. Paris: Klincksieck.

[62] Brehmer, F. (1925). Melodie auffassung un melodische begebung des kinders. Leipzig: J.A. Barth.

[63] Reimers, D. (1927). Unterschungen uber die entwickelung des tonalitatgefuls, cited in La perception de la Musique, by R. Frances. Paris: Vrin, 1958.

[64] Teplov, B.M. (1966). Psychologie des aptitudes musicales. Paris: Presses Universitaires de France.

[65] Shuter-Dyson, R. and Gabriel, C. (1981). op. cit., p. 143.

[66] Zenatti, A. (1969). op. cit.

The influence of training is another aspect that has received considerable attention by many researchers whose concern was of how people respond to music according to their level of training (e.g. difference between musicians and non-musicians), (Madsen,[67] and Scripp, Meyaard and Davidson[68]). So far, it has been widely recognised that musical development is not only a product of natural growth but is highly dependent on the kind of musical training people receive. (Hargreaves,[69] Shuter-Dyson and Gabriel,[70] Bunting,[71] and Swanwick[72]).

The result of a few recent studies carried out in the field of musical development, have come up with a broad framework of what can be called a *sequential pattern of musical development*. The drawing up of a sequence involves the establishment of a predictive pattern capable of some generalisation, at least within our cultural context. This is normally achieved when a theoretical framework is established and an empirical work is carried out. What seems to distinguish different theories and models of musical understanding, e.g.

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[67] Madsen, C.K. (1990). Measuring musical response. Music Educators Journal, 77, 3, 26-28.

[68] Scripp, L. Meyaard, J. and Davidson, L. (1988). Discerning musical development: using computers to discover what we know. Journal of Aesthetic education, 22, 1, 75-88.

[69] Hargreaves, D.J. (1986). op. cit.

[70] Shuter-Dyson, R. and Gabriel, C. (1981). op. cit.

[71] Bunting, R. (1977). The common language of music, music in the secondary school curriculum. Working paper 6, Schools Council, York University.

[72] Swanwick, K. (1988). Music, mind, and education. London: Routledge

Shuter-Dyson and Gabriel,[73] Bunting,[74] Moog,[75] Gardner,[76] Serafine,[77] and Swanwick and Tillman,[78] are their implicit theoretical views, or more specifically their ideas on what constitutes musical knowledge and understanding.

Shuter-Dyson and Gabriel, "Milestones of Musical Development",[79] consists of a summary of research developed in the field of musical ability and aptitude. If that model is to be taken, it is possible to identify that the predicted milestones describe only the materials aspects of musical experience. The expression dimension is only mentioned as an "increase in appreciation, cognition and in emotional response"[80] in the last level (12-17 years-old), as if before that, children would not be able to respond to such musical dimension.

Influential research in the field of musical

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[73] Shuter-Dyson, R. and Gabriel, C. (1981). op. cit., p. 159.

[74] Bunting, R. (1977). op. cit.

[75] Moog, H. (1976). The musical experience of the pre-school child. Translated by C. Clarke, London: Schott, first Published in Germany, 1968.

[76] Gardner, H. (1973). The arts and human development. New York: John Wiley.

[77] Serafine, M.L. (1988). Music as cognition: the development of thought in sound. New York: Columbia University Press.

[78] Swanwick, K. and Tillman, J. (1986). The sequence of musical development: a study of children's composition. British Journal of Music Education, 3, 3, 305-39.

[79] Hargreaves, D.J. (1986). op. cit., p. 61.

[80] Ibid., p. 61.

development has been carried out by Moog, with children ages 6 months to 5 1/2 years-old. As he states,

> the aim of this research is to investigate the stages of development. It is not simply a question of establishing the existence of specific types of musical experience in general, but of their place in child development.[81]

Moog showed that musical development is not out of step with general development,[82] thus proving that the age factor is one of the main aspects of musical development, but he does not draw on the issue of the effects of training as a promoter for further development, an issue that still needs considerable attention.

What Bunting calls the "Levels of Musical Communication", does cover a wide range of musical responses, ranging from "neurological" reactions to music, to a "symbolic" response to musical discourse.[83] Despite the fact that he does not use the word 'sequence', he does recognise that there is a hierarchy of musical experience.[84] Bunting's work on the establishment of the main modes of musical perception exerts a considerable influence on Swanwick and Tillman's Spiral Theory of Musical Development.

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[81] Moog, H. (1976). op. cit., p. 3.

[82] Ibid., p. 70.

[83] Bunting, R. (1977). op. cit., pp. 3-4.

[84] Ibid., p. 5.

Gardner's[85] theory, on the other hand, is mainly concerned with the acquisition and use of symbols. He argues that symbols are organised into different systems. He suggests that artistic behaviour combines three interacting systems - Making, Perceiving and Feeling. He proposes a pattern of aesthetic development consisting of two broad stages: presymbolic period (first year of life), followed by a period of symbol use (ages two to seven). He goes as far as to suggest that at the age of seven children demonstrate the characteristics of an audience member, artist and performer.

Serafine's[86] theory centres on the relationship between music and cognition, arguing that composing, performing and listening activities share a common cognitive process. She proposes two types of general cognitive process supposedly common to all styles and idioms: temporal and non-temporal. From that basic principle she carried out tests with children ages 5, 6, 9, 10, 11, and 15 years-old, and found that temporal and non-temporal processes seem to be present in children age 11 up. One of the criticisms that could be made is that she does not present an age-related account of the way children process music, which makes it difficult to apply the theory to assessment of listening in audience.

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[85] Gardner, H. (1973). op. cit.

[86] Serafine, M.L. (1988). op. cit.

The Swanwick and Tillman[87] Spiral of Musical Development can be considered the first developmental sequence rooted in the comprehensive nature of musical experience. It offers researchers and teachers the possibility of finding out in which level of musical understanding the child is operating and from that offers information on what kind of understanding children need to have in order to maximise their musical responses in the three musical activities (composing, performing, and listening).

As different theories are concerned with different explanations, it is possible to view the Spiral Theory of Musical Development as trying to describe the trajectory of how people come to understand music within a framework of four dimensions of musical criticism described by Swanwick[88] as Materials, Expression, Form and Value. This theory is more concerned with how one becomes capable of approaching music in a critical way, rather than being confined to describe the acquisition of specific skills. Within these critical dimensions there is a description of specific musical behaviours expected, which according to the theory, denote the levels of the musical understanding of each individual.

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[87] Swanwick, K. and Tillman, J. (1986). op. cit.

[88] Swanwick, K. (1982). The arts in education: dreaming or wide awake?. Special Professorial Lecture, Institute of Education University of London.

Previous works on musical abilities, aptitudes, and most of the musical development theories and models, offer serious limitations as far as assessment in music education is concerned. This is mainly due to the fact that the general tendency is to compartmentalise musical experience into different abilities. Musical development in previous works has focused on either listening as in the case of musical ability tests, or on the performance domain. Although based on the developmental principle, theories such as Gardner and Serafine failed to propose a comprehensive model able to be used to assess children's response to listening, due to the lack of clear criteria based on musical criticism. On the other hand, models such as Bunting's, and Shuter-Dyson and Gabriel's lack a comprehensive theoretical basis.

As far as assessment in music education is concerned, it could be said that none of the models and theories preceding Swanwick and Tillman's are able to be used to compare children's musical development across the three musical activities - composing, performing and listening. Thus without a theory based on musical criteria (dimensions of musical criticism), there is no way of comparing musical activities across different levels of musical understanding. The Spiral Theory of Musical Development is the first theory that offers the possibility of matching different musical products across single criteria, the possibility of stating that someone

has reached 'X' level in composing, and 'Y' in listening. This is what makes the Spiral Theory unique.

Although the Spiral Theory originated from the analysis of children's compositions, Swanwick already validated his theory by further research such as with Cyprus children's compositions.[89] In his latest book, Swanwick[90] does suggest that the Spiral Model and criteria can be used to assess the two remaining activities - performance and listening. There is ongoing empirical research concerning whether the Spiral Model is able to be used in the assessment of performance (as yet undocumented). One area that has not been investigated is whether children's listening in audience responses can be mapped according to the Spiral Model of Musical Development. The core of the present study focuses on this aspect of the Spiral Model.

1.2 - THEORETICAL BACKGROUND OF THE SPIRAL THEORY OF MUSICAL DEVELOPMENT

The Spiral Theory of Musical Development,[91] had its

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[89] Swanwick, K. (1991a). Further research on the musical development sequence. Psychology of Music, 19, 1, pp. 22-32.

[90] Swanwick, K. (1988), op. cit.

[91] Swanwick, K. and Tillman, J. (1986). op. cit.
Swanwick, K. (1988). op. cit.

beginnings with Swanwick's professorial lecture[92] and Tillman's[93] empirical work which together resulted in a model of musical development involving the three parameters of musical response (composing, performing, and listening).[94] Swanwick's paper The arts in education; dreaming or wide-awake?, marks the beginning of his theoretical investigation about the psychological process of musical experience. The aim of this lecture was to

> put forward a reasoned and positive view of the arts as essential for the development of *mind*, and to raise with you general implications for education and teaching.[95]

This paper came later to be the theoretical basis of the Spiral Theory of Musical Development where the works of Freud and Piaget on dreams and play were taken as a basis to search for the psychological process of musical development.

It seems that Swanwick's attempt to draw upon arts experience as having a psychological basis, was to dismiss the myth about the process of experiencing art as being relegated to the realm of private feeling, or

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[92] Swanwick, K. (1982). op. cit.

[93] Tillman, J. (1987). Towards a model of the development of musical creativity: a study of the compositions of children aged 3-11. Unpublished Ph.D Thesis, Institute of Education University of London.

[94] At the end of this chapter you will find a glossary of the terms used in this thesis, which meaning should be understood as belonging to the context of the present work.

[95] Swanwick, K. (1982). op. cit., p. 8.

'subjective-reflexive' action.[96] This same view is shared by authors such as Gardner,[97] who also recognises the need to go beyond the mere 'subjective realm' which relegates the arts to a place outside the stream of objective study. Implicit in Swanwick's (1982) and Gardner's (1973) writings may be the idea that in order for the arts to be valued or be part of mainstream education, one ought to demonstrate that there are objective features underlying its experience and its process of development. These views are an apparent rejection of those which relegate the arts "to a realm of private feeling, or 'subjective-reflexive' action" stated by Swanwick[98] and noted especially in the works of Robert Witkin and Malcolm Ross.

In the search for a psychological basis to explain the musical development process, Swanwick draws upon the work of Freud and Piaget. Having reached the conclusion that dream processes cannot be convincingly related to arts activities, Swanwick then discusses a possible relationship with Piaget's theory on play. Although Swanwick takes a Piagetian model and relates it to musical development, he stays away from Piaget's tightly formulated and age related stages model. Instead, he draws upon the work of Piaget when concerned with

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[96] Swanwick, K. (1982). op. cit., p. 10.

[97] Swanwick, K. (1982). op. cit.

[98] Swanwick, K. (1982). op. cit., p. 10.

fundamental human processes, those ways in which we make sense and grow into the world.[99]

The theoretical basis of the Spiral Theory "centres on the idea that play, a vital human characteristic, is intrinsically bound up with all artistic activity."[100] He shows how making and responding to music depends upon these three play impulses, namely, *Mastery, Imitation, and Imaginative Play*.[101] Swanwick offers a description of the three modes of play and how they analogically relate to the modes of musical experience - *Materials, Expression, and Form*. The research carried out with children's composition came to confirm that "musical compositions of children can be seen to follow a broad sequence of development, through Mastery, Imitation, and Imaginative Play, in that order."[102] Several conceptual models including Moog, Ross, and Bunting were influential towards the establishment of the Spiral Theory of Musical Development. But the major theoretical framework taken to interpret the differences found in compositions was based on Piaget's theory on play in early childhood.

In Music, mind, and education, Swanwick attempts to set the 'final version' of the Spiral Theory of Musical

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[99] Swanwick, K. (1988). op. cit., p. 55.

[100] Ibid., p. 55.

[101] Ibid., p. 42.

[102] Swanwick, K. (1988). op. cit., p. 58.

Development, by using part of some of his early works.[103] Here he then expands the theoretical discussion about the context in which concepts such as, development, stage, and even of Piaget's theory on play are used in relation to musical development. Regarding the development paradigm, he starts from the basic assumption that,

> children develop as they grow older and that this development depends on an interaction between the genetic inheritance of each individual and the environment - the physical world, home school and society.[104]

He then states that in music "there is development and that there are at least broad patterns of development are facts beyond dispute."[105] He then arrives at music suggesting that,

> there is a sequence, an orderly unfolding of *musical* behaviour, that there are cumulative stages through which the musical behaviour of children can be traced.[106]

Swanwick stresses the need for establishing a theory of music education on which educational practice can be based. He advocates that without an organising principle "any account of musical development in children will be

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[103] Swanwick, K. (1982). op. cit.
Swanwick, K. and Tillman, J. (1986). op. cit.

[104] Swanwick, K. (1988). op. cit., p. 53.

[105] Ibid., p. 53.

[106] Ibid., p. 53.

merely descriptive, lacking both in interpretative interest and predictive power."[107]

1.3 - THE LEVELS, STAGES, AND PHASES OF THE SPIRAL THEORY OF MUSICAL DEVELOPMENT

1.3.1 - MASTERY, MATERIALS: SENSORY AND MANIPULATIVE

Despite the fact that Swanwick uses the Piagetian model of play development, he offers little description of the modes or levels of play development (Mastery, Imitation, Imaginative Play), in the sense of how children respond to the environment at specific ages as predicted by Piaget.[108] Instead, he takes the path of directly relating Piaget's levels of Play to the dimensions of musical criticism.

Mastery then, is described as the first level through which everyone goes when relating to arts in each parameter - former, performer, audience. It is the level where the handling of materials is the focus of attention. The Piagetian Mastery level is analogically related to the *Materials* stage, which in musical terms

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[107] Ibid., p. 54.

[108] The investigation concerning the psychological background of the Spiral Theory, will be carried out in the third chapter of this thesis.

would involve a *Sensory* and *Manipulative* response to musical materials. The Sensory is characterised by the response to pitch differences, level of loudness, timbre, etc. At this phase children would be responsive to the overall impressiveness of sound. In composing and performing, experimentation with instruments or any other sound source takes place. Swanwick states that

> at this level, the elements of music are pretty disorganised; pulse is unsteady and variations of tone colour appear to be musically arbitrary, having no apparent structural or expressive significance.[109]

The Spiral phase that follows the Sensory one is the *Manipulative*. Here the child moves from his egocentric response to musical materials to a more socially shared musical interaction. Activities at this phase are characterised by the increase of interest in the techniques involved in the handling of instruments, i.e. children increasingly become aware that responding to music involves responding to a particular sound source. There is a growing interest (investigation) in what kind of sounds a particular instrument can offer. Musical materials are still handled with little expressive characterisation but children may identify,

> devices to do with the management of musical material: for example trills; *tremolos*; scalic patterns; *glissandi*; steady or fluctuating beat; spacial and stereophonic effects; like and unlike

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[109] Swanwick, K. (1988). op. cit., p. 77.

instrumental sounds.[110]

Responses such as "I like" this music or "dislike' a particular instrument are also likely to appear in this stage.

In the theory it seems impossible to take 'short cuts' to any other stage (dimension) of musical response unless the musical materials are confidently mastered. Its handling seems to work as a pre-requisite to any stage that follows.

1.3.2 - IMITATION, EXPRESSION: PERSONAL AND VERNACULAR

Once children have begun to master musical materials they proceed to respond to the expressive character of music - *Expression* stage. The related psychological level is *Imitation*. As a first description of the relationship established, Swanwick states that

> the more obviously representational an arts activity is, the more it refers to events in life; the more it is imitative, having what I call *expressive character*.[111]

Here then, the relationship between the Imitation level

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[110] Ibid., p. 153.

[111] Swanwick, K. (1988). op. cit., p. 44.

and the Expression stage in regards to the degree in which musical gestures relate to dynamic elements of human experience is established. This does not mean a mere reproduction of sounds found in nature, for example, using drums to represent thunder. Although this kind of response is not ruled out as a category of imitation, Swanwick asserts that "there is a powerful tendency for music to be expressive, without being in any way illustrative, or representational."[112] Here, Imitation is not meant as mere copying, but as expressing a capacity for responding to the analogous movements or gestures of expressiveness of the musical discourse.

The Spiral stage of Expression is subdivided into two quite distinct ways of responding to music: The first, *Personal*, is characterised by the idiosyncratic way children start to explore changes of speed and loudness level in a quite deliberative way, many times unpredictable. Here there is an attempt to work out little phrases - "musical gestures" - but still without structural control. Expressive gestures are produced or perceived for their own sake like a response for the 'desire' of the moment. This is noticed particularly in children's singing where there is a tendency to change speed dynamic level in an unstructured way. In composition, there is still a mastery of limited materials sufficient enough to explore its expressiveness

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[112] Ibid., p. 65.

in a personal and spontaneous manner. When listening to music in audience the child describes the general atmosphere, mood or character of a passage, which may be in terms of "dramatic incident, stories, personal associations and visual images, or feeling qualities."[113]

The shift from the Personal to the *Vernacular* phase within the Expression stage is characterised by

> a move from the personal and idiosyncratic production of music still closely linked to sonorous impact and experiment, towards socially shared *Vernacular* conventions.[114]

It is the time when children fully incorporate and express the patterns which characterises the musical discourse of particular cultures. There is an increased awareness, for example that the lower pitch with increasing 'accelerando' and level of loudness will make the music sound perhaps 'mysterious', 'heavy' as well as 'dramatic' as opposed to a 'happy' and 'lively' character.

Swanwick reminds that,

> This is not expressiveness arising directly from the child's personal state of feeling but an entry into a shared world of musical ideas, where, sometimes,

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[113] Ibid., p. 154.

[114] Ibid., p. 66.

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> expressive character appears to be second-hand.[115]

In composition melodic phrases, metrical organisation with some repeated patterns, are consistently managed and thus move towards exploring a particular expressive characterisation. Children's musical discourse at this phase is very predictable with little contrast or development. "The vocabulary of expression lies within recognisable musical conventions."[116]

What is noticeable at this point in children's musical development is the acculturation process. While at the Sensory phase children seem to be mainly concerned with the randomised handling of musical material, at the Vernacular phase, children are already starting to become aware of the musical cultural framework in which idioms are handled. The Imitation level is then a necessary one within the process of "getting acquainted" with the established musical norms. In Piagetian terms, this psychological process is characterised by the primacy of accommodation over assimilation.

1.3.3 - IMAGINATIVE PLAY, FORM: SPECULATIVE AND IDIOMATIC

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[115] Ibid., p. 67.

[116] Ibid., p. 152.

The third mode or level of development, *Imaginative Play*, is related to the *Form* stage. At this level of play development children do not simply imitate (accommodate to their environment), but rather seek for a transformation of the objects handled.

> Objects and people are transformed into other than themselves ... they are ... assimilated into this world and transformed to fit into the unique make believe perspective of the individual.[117]

Imaginative Play has to do with structural transformations, with personal interpretation, reconstituting reality.[118]

In music, this level is related to the handling of formal elements which happens in two distinctive phases - through *Speculative* and *Idiomatic* response to the musical structure. Swanwick clearly states the pre-requisites necessary in order to achieve the level of Imaginative Play by stating that "musical speculation clearly depends on some fluency of manipulative ability and on an awareness of certain conventions of expressiveness."[119] It is clear then, that in order to achieve the *Speculative* phase children had to have mastered musical materials, and been acquainted with the norms in which a particular musical culture operates. Once more, the

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[117] Swanwick, K. and Tillman, J. (1986). op. cit., p. 308.

[118] Ibid., p. 309.

[119] Swanwick, K. (1988). op. cit., p. 72.

notion of the cumulative process of musical development becomes evident.

In the Form stage one still manipulates materials in order to try to raise a specific expressive gesture. The additional element demonstrated by Swanwick is that the "*Speculative* mode indicates a new concern for musical form, for making music which is not only characterful but also coherent."[120] Here more than ever, formal aspects are carefully and 'consciously' handled. Musical patterns are not merely imitated but transformed through structured speculation. There is also an awareness of the "whys" of particular expressive gestures, why certain musical elements are structured in such a way as to convey certain expressive characterisation. Compositions in the Speculative phase show that musical materials are starting to be handled in a more organised way. Although the expressive character may be still conventional, there are clearly attempts to transform musical ideas, i.e. explore expressive gestures through structural and formal experimentation.

Following the Speculative, comes the *Idiomatic* phase where structural experimentations become more integrated into a particular style. At this point "technical, expressive and structural control begins to be

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[120] Ibid., p. 72.

established reliably over longer periods of time."[121] Although speculation into formal elements still happens, it is now more clearly framed within an established convention, or musical 'idiom', where at this age the world of popular music is especially influential.[122] In compositions, musical materials are handled in an organised and coherent way within a particular style, or as Swanwick states,

> there will be imaginative structural juxtapositions taking place over a time period long enough to demonstrate an ability to sustain and develop musical thought.[123]

What characterises the student in the Imaginative Play level - Form stage - is his/her capacity for exploring musical materials, seeking a particular expressive gesture through the awareness and understanding of formal musical procedure.

1.3.4 - META-COGNITION, VALUE: SYMBOLIC AND SYSTEMATIC

The higher level of psychological operation of the Spiral has been named *Meta-Cognition*. Swanwick and Tillman point out that at this level

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[121] Swanwick, K. and Tillman, J. (1986). op. cit., p. 333.

[122] Ibid., p. 333.

[123] Swanwick, K. (1988). op. cit., p. 153.

> a strong sense of value often publicly declared, permeates this mode of musical experience. Music has meaning for an individual at high level of personal significance.[124]

The Meta-Cognition level is manifested through the increasing capacity of thought independence and communicates by means of symbolic representation. "This self-accounting or self-consciousness permits the transition from merely orderly behaviour to logical behaviour, so called."[125] The psychological Meta-cognition level is related to the *Value* musical stage. The great shift from the previous phase (Idiomatic) to this stage is that here, there is a greater tendency for individuals to go on their own way and be less concerned about general consensus.

The first phase of this stage is the *Symbolic*. As was described by Swanwick and Tillman, "at the symbolic level there is a growing sense of music's affective power and a tendency to become articulate about this experience."[126] In this phase there is a greater capacity to distance oneself from the work and therefore reflect upon the experience. Musical values become more idiosyncratic. In composition there is, more than ever, a search for novelty strongly founded on musical

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[124] Swanwick, K. and Tillman, J. (1986). op. cit., p. 330.

[125] Ibid., p. 330.

[126] Ibid., p. 333.

expressiveness and formal understanding.

Following the Symbolic comes the last phase predicted by the Spiral - the *Systematic*. Here a composer, listener or performer would be able to show a strong capacity for reflecting about his or her own musical experience. In either parameter there is a consciousness of stylistic principles that characterise different musical idioms. Swanwick points out that the evidence for this phase lies in the writings of musicians, especially composers.[127] New musical universes and distinct ways of mapping out musical experience are characteristics of the work of some composers, for example, Schoenberg and Cage, who not only dedicate themselves to a search for different musical universes but are also concerned with the aesthetic nature of musical experience. "Musical composition at this level may be informed by research and the study and development of new systems, novel organising principles."[128]

Figure 1.1 represents the model of musical development as it presently stands.

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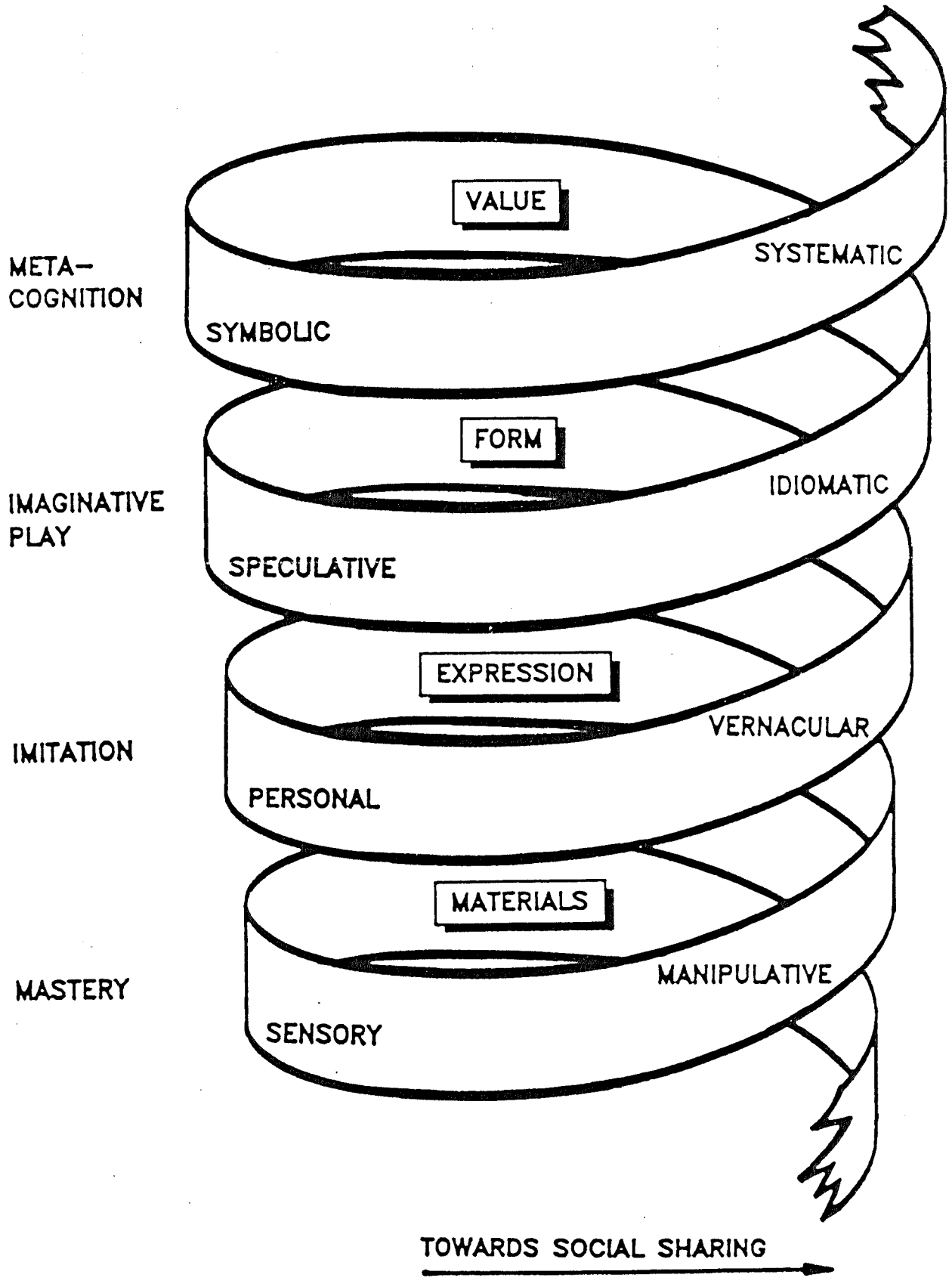
[127] Swanwick, K. (1988). op. cit., p. 75.

[128] Ibid., p. 80.

Figure 1.1: THE SPIRAL MODEL OF MUSICAL DEVELOPMENT



Swanwick presents three main reasons why the process of musical development is seen as cyclical and therefore presented like a *spiral*. First, the spiral form relates to the fact that

> we never lose the need to respond to sound materials, reentering the Spiral repeatedly, no matter what age we happen to be or how musically experienced we are.[129]

In other words, the Spiral sequence is reactivated every time new music is experienced. The second reason has to do with the fact that musical development is seen as a cumulative process.

> When making music, sensory sensitivity and manipulative control interact with each other and, later on, with personal and conventional expressiveness.[130]

The third reason relates to what Swanwick defines as a "recurring pendulum swing in musical development"[131] between the phases in each level, those moving from the individual and idiosyncratic responses to more socially stimulating ones. He argues that there is a developmental pattern that moves 'up' (between the Spiral stages) and another that moves 'across' (between every two phases of each stage).

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[129] Ibid., p. 67.

[130] Ibid., p. 67.

[131] Ibid., p. 67.

Under the subtitle Musical development and musical encounter, Swanwick[132] attempts to demonstrate that the Spiral Model can also be seen as a "map of the elements of musical response", what in this thesis will be called the *criticism model*. As a criticism model it presents an answer to a central question which involves musical experience, namely: what are the elements to which we respond in music? Swanwick argues that any musical engagement needs to fulfil certain required standards of musical responsiveness. These are argued to be encompassed by the four modes of musical responses, or dimensions of musical criticism - *Materials, Expression, Form and Value*. In other words, the argument is that any musical response in either parameter has a degree of *Materials* response (to the sound itself), *Expression* (understanding of the metaphorical shapes and colours), *Formal* (awareness towards structural organisation) and *Value* (independence of Value judgement of music). In this sense,

> the modes of the Spiral not only are developmental descriptions but also can be seen as layers in the language of musical engagement and therefore of musical *criticism*. I would go so far as to say that any observations a music critic might make are bound to fall within one or other of these modes.[133]

Swanwick's Theory of Musical Development,

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[132] Ibid., p. 81.

[133] Ibid., p. 83.

'graphically' represented by the Spiral Model, seems to focus the attention on three main issues: the *musical criticism model* represented by the four dimensions of musical criticism - Materials, Expression, Form, and Value; the *developmental model* represented by the analogy between the dimensions of musical criticism and the levels of Play Development - Mastery, Imitation, and Imaginative Play. Finally integrating the two, the *musical assessment model*, which was later suggested as the first organic model capable of being used to assess musical understanding through the three parameters or activities - composing, performing, and listening.

1.4 - CONCLUSION

The present study argues in favour of the Spiral Theory of Musical Development which offers the first organic model capable of being used to assess musical understanding through the three musical activities. It remains to be seen whether or not listening in audience responses can be mapped according to the Spiral Model and there is also a need to further investigate some of the theoretical issues. There are some theoretical gaps in the course of Swanwick's discussions. On what basis was the Spiral Theory conceived as being developmental? Does it conform with the developmental concept of cognitive and child development? And how far is Piaget's

development of play suitable to relate to musical development? These questions will form the focus of the following two chapters.

CHAPTER 2: THE SPIRAL AS A MUSICAL DEVELOPMENT THEORY

In carrying out a critical analysis of some of the major claims of the Spiral Theory, the present study centres on three of these: two theoretical and one empirical. First, does the Spiral Theory of Musical Development accord with the principles of a developmental theory? Second, how far can Piaget's theory on play development be conceived as having similarities with musical development? And third, can responses made by children listening in audience be mapped according to the Spiral Model of Musical Development? Only after an investigation of these claims is it possible to consider the Spiral theory, not only as developmental one but also as a theory and a model capable of being used in the assessment of musical understanding.

To pursue the investigation of the first claim, that of the developmental adequacy of the Spiral Theory, some of the general concepts and definitions of the word *development* need to be considered. Following that, Green's[1] set of criteria for evaluating the adequacy of a developmental theory is taken as one of the possible ways of investigating if the Spiral can be counted as a theory

[1] Green, M. (1989). Theories of human development: a comparative approach. New Jersey: Prentice Hall.

of musical development.

The discussion pursued in this chapter does not have the pretension of presenting all the answers to the problems faced by this or any theory of musical development. Instead it aims to shed light on and discuss further issues concerning the validity of a theory which attempts to go beyond simply mapping musical responses. Instead, this theory intends to be a developmental theory as well as a model through which children's musical responses can be assessed, preferably through the three musical activities (composing, performing and listening). It is important to emphasize that in the case of musical development, the word 'development' does not refer to cognitive development, despite the fact that part of the Spiral Theory analysis will be made in the light of definitions made in developmental psychology and theories of cognitive development. Although developmental theories in general are mainly concerned with the investigation of human nature, attempting to explain ontogenesis,[2] they offer the means to further analyze the general developmental process of musical understanding.

In the case of Swanwick's Spiral Theory of Musical Development, there is a theory as well as a model that illustrates the theory - the Spiral. As the intention is

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[2] "The relatively permanent changes individuals undergo during their life span." Green, M. (1989). op. cit., p. 15.

not to use them as synonymous, it is important to draw on some of the differing elements based on Green's description. According to him, "a theory is a linguistic abstraction ... it is a complex set of statements with certain properties,"[3] and the main purpose is to explain phenomena. It works as a tool to organise facts and interpret their meaning. Models on the other hand, "are analogies drawn from something that is known, extended to the unknown,"[4] and one of their primary functions is "to aid in but not replace a theory building."[5] This work then, is not concerned with the analysis of the Spiral as an appropriate 'model' to represent the musical development theory, but rather with the analysis of the *Spiral as a Theory of Musical Development*, which uses the Spiral as a model to represent its principles.

2.1 - THE SPIRAL AS A DEVELOPMENTAL THEORY

When presenting the Spiral Theory of Musical Development as a developmental theory, Swanwick[6] starts by describing the concept of development that would be applicable to the theory proposed. The definition encompasses the notion of growth from one point to the

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[3] Green, M. (1989). op. cit., p. 4.

[4] Green, M. (1989). op.cit., p. 5.

[5] Green, M. (1989). op. cit., p. 5.

[6] Swanwick, K. (1988). Music, mind, and education. London: Routledge.

other, and that this growth implies a certain sequential pattern. As he states:

> Everyday observation tells us that children develop as they grow older and that this development depends on an interaction between the genetic inheritance of each individual and the environment - the physical world, home, school, society. A second 'commonsense' observation is that there is an element of predictability about this process of development.[7]

He suggests that,

> there is a sequence, an orderly unfolding of *musical* behaviour, that there are cumulative stages through which the musical behaviour of children can be traced.[8]

The definition of development used by Swanwick as being most appropriate for the Spiral Theory, was taken from Maccoby, where she offers two meanings for the word development: the first "'softer' meaning, is the idea of sequence."[9] The idea of things occurring in a certain order. Within this concept lies the notion of early behaviourial acquisition being necessary but not sufficient for later stages to occur; the second refers to the fact that "there are broad developmental changes that occur in almost all children according to a fairly

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[7] Ibid., p. 53.

[8] Ibid., p. 53.

[9] Maccoby, E.E. (1984). Socialization and development change. Child Development, 55, 317-28. p. 320.

standard timetable."[10]

That definition of the word development seems most appropriate since the Spiral Theory predicts that the development of musical understanding proceeds according to a specific pattern, empirically confirmed through the observation of compositions from children in England,[11] and in Cyprus.[12] From this 'softer' definition of the word development as the most appropriate in the case of the Spiral, two questions remain to be answered: a) What does the word development connote? and b) What are the pre-requisites for a theory to be developmental?

Authors such as Harris,[13] Spiker,[14] Green,[15] and others, emphasize that the word development has not only been used in different fields, but has also taken on different definitions. According to Harris, "the concept of development is fundamentally biological," and "has been most commonly associated with the organisation of

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[10] Ibid., p. 320.

[11] Swanwick, K. and Tillman, J. (1986). The sequence of musical development: a study of children's composition. British Journal of Music Education, 3, 3, 305-39.

[12] Swanwick, K. (1991a). Further research on the musical development sequence. Psychology of Music, 19, 1, 22-32.

[13] Harris, D.B. (1957). Problems in formulating a scientific concept of development, in The concept of Development, ed. D.B. Harris. Minneapolis: University of Minnesota Press.

[14] Spiker, C.C. (1966). The concept of development: relevant and irrelevant issues, in Concept of Development, ed. H.W. Stevenson, 31 5, serial No.107.

[15] Green, M. (1989). op. cit.

living structures and life processes."[16] By analogy it has also been "applied to psychological, sociological, economic, political, and even artistic and aesthetic events."[17] To some extent the problem of defining the word arises due to the number of circumstances in which the word has been used resulting in what Olson calls the lack of standardization of words such as growth, maturation, and development, particularly when one moves from one field to another.[18] On the other hand it is possible to identify that there are some shared characteristics attributed to the word development. These consist of: development implying change over time, that there is an age-related change of behaviour (in the case of human development), and the notion of cumulative process, of stage, directionality, etc.[19] The fact that the term development has been mainly used as referring to biological and psychological changes and so correlates with change in behaviour and chronological age does not mean that the same concept cannot be employed in a broader sense in the case of musical development.

In general, the term development implies a certain

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[16] Harris, D.B. (1957). op. cit., p. 3.

[17] Ibid., p. 4.

[18] Olson, W.C. (1957). Development theory in education, in The Concept of Development, ed. D.B. Harris. Minneapolis: University of Minnesota Press. p. 259.

[19] Nagel, E. (1957). Determinism and development, in The Concept of Development, ed. D.B. Harris. Minneapolis: University of Minnesota Press.
Green, M. (1989). op. cit.
Harris, D.B. (1957). op.cit.

meaning of starting from one point, and after a period of time progressing to another one. If development implies such a growth or progression in an established sequence, what then constitutes a developmental theory? According to Miller,

> a developmental theory describes changes over time in one or several areas of behaviour or psychological activity, such as thought, language, social behaviour, or perception.[20]

No single developmental theory has explained the whole process of human development. Rather, these theories tend to concentrate on specific areas of development such as language, perception, or as in this case, musical development. What are the pre-requisites for a theory to be developmental? Green,[21] Anderson,[22] and others, propose a way of defining development in terms of certain characteristics which according to them "can serve as a set of criteria against which theories can be evaluated for their *developmental adequacy*."[23] Those characteristics are named by Green as: *Temporality, Cumulativity, Directionality, New Mode of Organisation, and Increased Capacity for Self-Control*.[24] These criteria

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[20] Miller, P.H. (1983). Theories of developmental psychology. San Francisco: W.H. Freeman. p. 6.

[21] Green, M. (1989). op. cit.

[22] Anderson, J.E. (1957). Dynamics of development: system in process, in The Concept of Development, ed. D.B. Harris. Minneapolis: University of Minnesota Press.

[23] Green, M. (1989). op. cit., p. 15.

[24] Ibid., 15-19.

will be taken as one of the possible ways of discussing the "developmental adequacy" of the Spiral as a musical development theory.

2.1.1 - TEMPORALITY

Harris[25] and Green[26] state that "all development presumes an element of temporality, which means that changes tend to occur over time". The Spiral Theory of Musical Development does conform to this principle or characteristic since it proposes a sequence in which children from 3 to 11 years respond to music in a qualitative different way. Although the Spiral Theory does not advocate that a specific musical response will *always* occur according to a fixed age, the empirical work done so far,[27] does show a strong correlation between the musical compositions of these children and their age.[28]

What the empirical data offer, as "factual evidence" is that there is such a thing as a developmental process. As in human development, a child is different from an adult in musical development. In general, a more musically educated child will probably demonstrate

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[25] Harris, D.B. (1957). op. cit., p. 3.

[26] Green, M. (1989). op. cit., p. 15.

[27] Swanwick, K. and Tillman, J. (1986). op. cit.
Swanwick, K. (1991a). op. cit.

[28] Swanwick, K. (1988). op. cit., p. 62.

greater musical understanding than a child who is starting his/her musical studies. Even though age-related development is not taken as intrinsically bound with musical development, it should consider time as an important variable in the process of musical development. The time that one needs to be exposed to music education or, in other words being systematically engaged with music, in order to develop from one point to another may vary significantly according to the kind of formal input, environment and even cognitive development. It would be commonsense to say that a 10 year-old child would grasp certain musical features faster then a 4 year-old. Since any systematic engagement in any field of education requires a certain cognitive development, the same could be applied to music. As Olson mentions, "maturation, growth, and development involve time as an important dimension."[29]

Thus, in musical development, when it comes to the age-related responses issue, it may be suggested that the responses were categorised according to children's age. This categorization according to Spiker enables one "to increase the precision of the experiment."[30] The differing point lies on the fact that there may be little age-related musical development unless there is a systematic engagement with the musical field, either

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[29] Olson, W.C. (1957). op. cit., p. 260.

[30] Spiker, C.C. (1966). op. cit., p. 43.

through composing, performing, listening in audience, or all three together. This will bring us back to the actual contextual meaning of the word development, applicable to the process that takes a person from the 'lower' Materials response to music to a 'higher' Formal musical response. If Temporality is one of the characteristics that accounts for the appropriate use of the word development, it can then be suggested that Temporality is one of the criteria for evaluating the Spiral Theory.

We may assume that children will develop musically once engaged systematically in a specific musical education, or once exposed to a musically rich environment. What is not clear is the way one observes that development. How does the process of differentiation proceed? Is it sequential and cumulative?

2.1.2 - CUMULATIVITY

According to Green, Cumulativity means that

> developmental changes result in the addition of some new feature(s) to the organism: first one thing, then another, is acquired, ... and that ... developmental acquisitions imply a degree of permanence.[31]

As it was stated in the beginning of this chapter,

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[31] Green, M. (1989). op. cit., p. 15.

Swanwick[32] does suggest that the musical development process is cumulative, meaning that the mastering of early stages (e.g. Materials), is not only necessary for developing to higher stages and phases of musical understanding, but also that early stages would always be present in any advanced response (e.g. Form) to a musical work. Green[33] and Anderson[34] mention that "an important element of cumulativity is that of causal recession, wherein developing individuals will tend to retain some of the effects of past changes."[35] It is now important to ask, what is it that is acquired musically in such a way that it can function as a building block (cumulative) for further acquisition of musical understanding?

In order to attempt to answer the above question one has to try to understand what Swanwick[36] states as the four dimensions of musical criticism - *Materials, Expression, Form and Value*, and understand not only why they appear in children's compositions in the above order, but also what makes them sequential and hierarchical.

To begin with, the concept of development from the

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[32] Swanwick, K. (1988). op. cit.

[33] Green, M. (1989). op. cit.

[34] Anderson, J.E. (1957). op. cit.

[35] Green, M. (1989). op. cit., p. 16.

[36] Swanwick, K. (1991b). Musical criticism and musical development. British Journal of Music Education, 8, 139-48.

musical development perspective is closely related to what is defined as musical behaviour and consequently a musically developed person. This concept is also directly related to what is defined as someone having musical understanding. In this sense, for a theory attempting to be developmental it must have clarity in terms of what it is attempting to develop. The Spiral Theory of Musical Development presents a sequential pattern, of how this growing process of musical understanding proceeds i.e. how do children respond to music (through any parameter, e.g. composing, performing, and listening), in different ages or stages of development. It presents a comprehensive way of how children may develop their musical understanding as soon as they enter into the music field or start to engage systematically.

According to Swanwick, the four dimensions of musical criticism are "directly concerned with response to a musical object or event ... and these can be seen unfolding in the musical development of children."[37] Since the purpose of this work is not to verify these dimensions in relation to other theories of musical criticism, they will be taken as *'the'* four dimensions of musical criticism. They constitute what is labelled here

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[37] Ibid., p. 139.

as the *criticism model*, being this one of the three ways[38] of looking to the Spiral Model. Swanwick reinforces his argument that these are the four dimensions of musical criticism by saying that "there is no critical comment about a musical object or event that does not fall into one of these categories."[39]

Although different authors such as Bunting,[40] Moog[41] and Swanwick[42] employ different terms for similar musical responses, there is a certain level of agreement in what constitutes, for example, the "materials" of a musical work. This according to the Spiral Theory would encompass musical elements such as pitch, duration, timbre, etc.

Research with children's composition[43] has shown that the first musical responses tend to be towards the materials of a musical work. This, in Swanwick's theory, was suggested to be the same for both listening and performing. The psychological or cognitive reasons of why one tends to attend first to Materials goes beyond the scope of this work. However, one could probably see that

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[38] i.e. as a developmental model, criticism model, and assessment model.

[39] Swanwick, K. (1991b). op. cit., p. 140.

[40] Bunting, R. (1977). The common language of music, music in the secondary school curriculum. Working paper 6, Schools Council, York University.

[41] Moog, H. (1976). The musical experience of the pre-school child. Translated by C. Clarke, London: Schott, first Published in Germany, 1968.

[42] Swanwick, K. (1988). op. cit.

[43] Swanwick, K. and Tillman, J. (1986). op. cit.
Swanwick, K. (1991a). op. cit.

in order to give a 'formal' (Form stage) account of a musical work, e.g. if a specific harmonic progression deviates from the norm established, or how the woodwinds may expand a motif presented by the strings, one would necessarily have to have not only a substantial understanding of musical materials (pitch, duration, timbre, etc.), but would need to carry these 'concepts' along in their musical appraisal.

The same principle can be applied to the second stage of musical understanding - Expression. A response in terms of expressive characterisation of a musical work requires not only the understanding of materials involved, but also the expressive gestures they convey to the listener, composer or performer. According to the Spiral Theory predictions, the appearance of the Expression stage becomes evident once one would attend to or explore, for example, different levels of loudness, different timbral relationships and how they might affect the listener in terms of the perception of musical gestures.

Although musical gestures and expressive characterisation appear in the musical discourse within speculations and transformations in terms of form, one could respond to those elements without being aware (formally speaking), of what is happening in a particular musical work. Again there is not enough scientific

evidence to explain the psychological mechanisms involved in this kind of awareness. However, as far as empirical work with children's composition is concerned, they do appear to attend to expressive characterisation before any formal awareness or speculation takes place.

Moving toward the kind of responses one would give in terms of Form or Value stages, it is possible to see that in this case - musical development - the cumulative process is clearly present. There may be some qualitative differences in terms of the way one would respond to materials or expressive character elements once a greater level of musical understanding is achieved. However, this work subscribes to the view that the difference would lie perhaps only in the level of awareness of how the dimensions of musical criticism are perceived and articulated in a musical discourse, and that the early stages would not be abandoned when responding to any musical work, but rather they would be incorporated into a more interrelated and complex response.

This brief comment will take the work back to the early definitions of Cumulativity and confirm that this among others, is an important characteristic of what underpins the Spiral Theory of Musical Development.

2.1.3 - DIRECTIONALITY

If the Spiral Theory does encompass the notion of Temporality and Cumulativity, what about Directionality? As Green points out "directionality implies that developmental changes are progressive, relatively durable, and irreversible."[44] Among the many theories of development one can find different views of how directionality proceeds. As Green[45] explains,

> the direction may be from the general to the specific,[46] toward greater differentiation and hierarchic integration,[47] toward increased efficiency and specificity,[48] or toward increased distance from the initial state.[49]

Despite the fact that different theories advocate different processes of development within the same concept of directionality, they do have a common basis. This encompasses a notion that Directionality implies developmental changes through a progressive accumulation that is relatively irreversible.[50] Developmental changes in musical development are progressive to the extent that they proceed toward an increasing complexity in the way

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[44] Green, M. (1989). op. cit., p. 16.

[45] Ibid., p. 16.

[46] Hamburger, V. (1957). The concept of 'development' in biology, in The Concept of Development, ed.D.B. Harris. Minneapolis: University of Minnesota Press.

[47] Werner, H. (1957). The concept of development from a comparative and organismic point of view, The Concept of Development, ed. D.B. Harris. Minneapolis: University of Minnesota Press.

[48] Anderson, J.E. (1957). op. cit.

[49] Chapman, M. (1988). Constructive evolution: origins and development of Piaget's thought. Cambridge: Cambridge University Press.

[50] Green, M. (1989). op. cit., p. 16.

people respond to music. In this sense, it is understood that the process of accumulation alone does not imply progression. On the other hand the Spiral Theory does imply a sense of progression once it predicts that children, in the course of their musical development, will respond to music in a more complex way. This has already been mentioned within the discussion of the cumulative notion. On the other hand, the musically developed individual may or may not wish to operate or respond to music in its actual 'stage'[51] of development. One can respond to music through listening in audience and may want to concentrate mainly on the Materials or Expression stage, without taking into consideration the formal aspects of the musical work.

The other element, also emphasized by Swanwick, is that

> the developmental Spiral has to be re-activated each time music is encountered, and certainly when we are faced with a new piece as performer or in audience or when composing/improvising. The first and most striking impression of music is always its sensory surface, especially if we have been deprived of music for any length of time.[52]

What Swanwick seems to suggest is that, although one has already reached the Form stage, every time one faces a

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[51] The word stage replacing the word dimension of musical criticism, when the Spiral as a developmental theory is considered.

[52] Swanwick, K. (1988). op. cit., p. 82.

new piece of music there is a quick revisiting, but this response certainly differs from someone who is still operating in a Materials stage. In an audience-listening situation one could start the musical criticism by saying: 'there is a string quartet playing', but immediately after would attempt to engage in a more formal criticism. Whereas, if someone is still operating in the Materials stage, the response would not go beyond that. However, what is likely to occur is that once someone has reached the higher stage of the Spiral, he/she may have the option of engaging or responding to music in any dimension of musical criticism.

2.1.4 - NEW MODE OF ORGANISATION

The New Mode of Organisation characteristic is described by Green, as encompassing issues such as whether or not development proceeds in a stage like sequence.[53] Harris points out that the new mode of organisation characteristic "implies the emergence of new phenomena and new properties not manifested in previous states,"[54] requiring a radical alteration in the arrangement or structure of the individual.[55] Green[56]

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[53] Green, M. (1989). op. cit., p. 17.

[54] Harris, D.B. (1957). op. cit., p. 5.

[55] Green, M. (1989). op. cit., p. 9.

[56] Ibid.

also mentions that development in terms of a New Mode of Organisation implies the reorganisation of the individual (in cognitive terms). Within the musical development context, it can be said that every stage (Materials, Expression, Form, and Value), is characterised as a New mode of organisation in so far as it predicts that each stage constitutes a different way of responding to the same object - a musical work. In other words, an individual whose musical responses are made in terms of Materials (overall impression of the sounds, timbre, etc.), presents a qualitative difference between one whose responses to music encompass Expression or Form elements.

In order to discuss whether the Spiral Theory presents this characteristic, two issues need to be considered. The first relates to the fact that the Spiral Theory presents two forms of sequencing. One refers to the *stages* or dimensions of musical criticism (Materials, Expression, Form, and Value) which can be said to proceed in a linear and 'vertical' way, and the other refers to what is called as *phases* (two within each stage), which in this case proceed in a spiral or helix shape (Sensory, Manipulative, Personal, etc.). The second issue is whether or not the Spiral Theory of Musical Development can be considered a stage theory.

The way in which the stages of musical development are presented and defined suggests that each presents a

New Mode of Organisation to the extent that musical responses vary qualitatively among the four stages. Although there is a tendency, in different stage theories (e.g. Piaget) of perceiving each stage as a kind of independent process along the course of development, the stages of musical development should not be seen as totally independent from each other. What distinguishes musical development from other developmental theories (e.g. cognitive ones), is that lower stage responses do not cease to exist no matter how musically developed the person is. The difference lies in the fact that earlier stages are always incorporated in the upper responses which generates a complex interrelation of all stages. This is confirmed by Swanwick when he stated that, "there is no critical comment about a musical object or event that does not fall into one these categories."[57]

Here, Swanwick implies that responses to any musical work contain the four dimensions no matter how simple a work is. Thus the establishment of a hierarchy of stages in a 'vertical' way not only suggests that the stages are qualitatively different but also that the understanding of features belonging to the upper stages requires different degrees of musical understanding ranging from a simple identification of the musical materials to an interrelation of those materials into a formal way of structuring the musical discourse.

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[57] Swanwick, K. (1991b). op. cit., p. 140.

The difference between responses from someone who starts to engage in musical experience from someone who has already achieved higher stage of the Spiral, lies simply in the fact that the former's response will be restricted to the Materials stage while the latter will respond to the same materials elements in an interrelated way with the formal elements and expressive characterisation. In this case there exists not only the element of Cumulativity but also a new way of organising the response to the same musical work. Musically speaking, it can be said that the responses predicted in each stage are qualitatively different and require different degrees of musical understanding already supported empirically by research done with children's compositions.[58]

Although the analysis of compositions from children of different ages suggests that the dimensions of musical criticism appear in a specific sequence, there are still some questions that remain to be answered. One is whether or not this hierarchic sequence is capable of predicting the different stages of musical responses of the remaining parameters - performing and audience-listening. It seems that the suggestion made by Swanwick,[59] that this sequence may be the same for the other two

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[58] Swanwick, K. and Tillman, J. (1986). op. cit.
Swanwick, K. (1991a). op. cit.

[59] Swanwick, K. (1988). op. cit.

parameters or activities, was based on the sequence in which the dimensions of musical criticism appear and not on the actual psychological process underlying the acquisition of musical understanding. This issue will be further discussed in chapter three.

The discussion moves now to the way the eight phases sequence proceeds (e.g. Sensory, Manipulative, etc.). In opposition to the 'vertical' way the stages are presented, the phases proceed in a Spiral or two 'dimensional' way. In Swanwick's publication - Music, mind, and education - he mentioned the swing between left and right hand levels (here called phases), as consisting of a dialectic process between accommodation and assimilation, those being analogically related with Piaget's theory on play development. The left-hand side focuses on a more egocentric way of responding to music within each stage, while the right-hand side represents a move towards socially shared responses in each stage. As Swanwick states,

> on the one hand the internal individual motivation of children: the exploration of the sensory qualities of sound; personal expressiveness; structural speculation; subjective commitment to the symbolic significance of music. On the other side is the public domain: skill mastery; the conventions of the musical vernacular; idiomatic authenticity; the systematic extension of musical possibilities. Visual representation therefore required two dimensions, that of a Spiral, or perhaps more

accurately, a helix.[60]

In this case, the person's subsequent growing towards greater musical understanding always starts from a highly personal perspective of engaging with musical experience moving towards sharing that with the established musical conventions. Although the left and right hand side phases are part of the same stage, they also present a qualitative difference in so far as they start from a personal way of engaging with musical experience and move towards a socially shared perspective of engaging or responding to music. Or as Swanwick suggested, "it may be that the relationship between the left and right is a sign of this deep dialectic process."[61]

The qualitative difference between phases cannot be equated with the qualitative difference between stages. The difference lies in the fact that there might be a swing between phases, while the stages represent a move towards a new mode of organising the musical experience. An example may clarify this idea. When one's musical response is identified as being at the Materials stage, no matter in which phase, one will respond to the overall impression of sounds (e.g. pitch, dynamic levels, etc.). The difference between Sensory and Manipulative phase

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[60] Swanwick, K. (1991b). op. cit., p. 141.

[61] Swanwick, K. (1988). op. cit., p. 83.

seems to lie only in the way one articulates the same musical elements. In the Sensory phase, for example, the child experiments (in the case of compositions) with the actual sounds in a 'personal' or egocentric way. When he/she moves to the Manipulative phase, the musical response is still towards the musical materials, although here he/she tries to accommodate to the socially established way of dealing with those materials. For example, instead of simply 'striking' the instrument in a random way, the child actually tries to find out the techniques (socially determined) involved in mastering a musical instrument. Nonetheless he/she is still exploring or responding to the actual materials of the music. In this case, there are no attempts to respond to music in terms of Expression or Form.

This kind of qualitative difference between phases can be seen in every subsequent stage. However, when the child moves from one stage to the next the qualitative response changes to another dimension of musical criticism - e.g. from Materials to Expression. Here the child incorporates the musical material seeking expressive characterisation. This means that sounds do not have an end in themselves, but that they are capable of generating specific gestures whether perceived in a personally related or socially shared way. In other words, the child is capable of responding to music that denotes a different mode of organising his/her musical

experience.

In an attempt to argue that the four stages of musical development not only evolve in a cumulative way, but that they also are characterised as new modes of organisation, we have to ask whether or not the Spiral is a stage-like theory. According to Anderson, there are still controversies in child development studies as to whether development is a

> continuous process with small increments out of which higher levels of behaviour gradually emerge, or whether there are distinct stages through which the organism must pass in order to move on to a new level of development.[62]

Wohwill[63] comes to confirm that 'stage' can mean a number of different things in developmental psychology.[64] In this sense Flavell's definition of stages in human cognitive growth can highlight the discussion about the Spiral Theory of Musical Development as being or not being a stage-like theory. He states that

> ... human cognitive growth is 'stage-like' to the extent that the child's mind is at any given point in its development 'all of a piece' - constant, consistent, uniform, and

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[62] Anderson, J.E. (1957). op. cit., p. 40.

[63] Wohwill, J.F. (1966). Comments in discussion on the developmental approach of Jean Piaget. American Journal of Mental Deficiency, Monograph Supplements, 70, 80-105.

[64] Flavell, J.H. (1982). Structures, stages, and sequences in cognitive development, in The Minnesota Symposia on Child Psychology, ed. W.A. Collins, Vol.15. New Jersey: Lawrence Erlbaum Associates Publishers. p. 5.

> homogeneous in its character, quality, and level of cognitive maturity across all tasks, situations, and cognitive domains.[65]

The above definition, if applied to a musical development discussion suggests that in order for a musical development theory to be characterised as stage-like, it should demonstrate that specific musical responses can be clustered under specific musical dimensions. This job has already been sufficiently accomplished by Swanwick and Tillman[66] and Swanwick[67] when they describe not only what kinds of musical behaviour or responses would characterise each stage, but also what is the scope and role of each phase within each stage and how the phases themselves serve as 'bridges' to subsequent stage development.

Returning to Wohwill's[68] idea that the word stage can mean a number of different things in developmental psychology, it is nevertheless applicable to this work as long as it used with a contextual definition. Thus the word *stage* for the purpose of this work, is understood as comprising an *observable typical behaviour at a specific time* and, that it *should occur frequently as well as spontaneously*. Therefore, if one advocates that a

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[65] Ibid., p. 6.

[66] Swanwick, K. and Tillman, J. (1986). op. cit.

[67] Swanwick, K. (1988). op. cit.

[68] Wohwill, J.F. (1966). op. cit.

developmental sequence proceeds in stages, the above elements have to be clearly observable in those stages. In any stage theory, whether in developmental psychology or in musical development, one could assume that a stage constitutes the possibility of identifying the *typical*, which would presupposes a *specific behaviour* occurring *frequently* and *spontaneously* at a given time.

The point to be emphasised is that stage does not mean a stagnation of a specific behaviour but rather a process of development which encapsulates a specific range of behaviours. The above definitions of the word 'stage' is perhaps what Swanwick defined as the 'soft' concept of stage. When the child is mastering some musical material, the activity itself leads the child into a process of greater understanding of the specific material. When the word stage is used, it is simply to state that despite the child's increasing understanding of a specific musical material, the response is still focused on the overall impression of the sounds (pitch, dynamic and timbre changes). Thus he/she will still be identified as being in the Materials stage. On the other hand, if the child steadily approaches musical materials aiming to explore specific musical gestures of a musical discourse in a more organised way, it is possible to say that this child has now entered a new stage of understanding and control of musical materials, and that these responses are now part of a new stage of

control.

From the preceding discussion it is possible to see that there is at least one thing characterising the different stages in musical development - the changing of motivation towards the musical materials. This change of motivation implies a change of behaviour, as well as attitude, towards a specific musical work. In other words, a child at the Sensory phase (Materials stage) will have a completely different involvement and musical experience than the child who has reached the Vernacular phase (Expression stage). This can be analogically confirmed with what Piaget defines as stages in cognitive development. He says that

> if we restrict ourselves to major structures,[69] it is strikingly obvious that cognitive stages have a sequential property, that is, they appear in a fixed order of succession because each of them is necessary for the formation of the following one.[70]

Although the present work does not relate to cognitive, intellectual or physical development, there are certain basic principles that can be considered analogous in any process of human development. Maier, in his analysis of Piaget's developmental theory mentions for example that "Personality development proceeds from

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[69] In this case the dimensions of musical criticism.

[70] Piaget, J. (1970a). Piaget's theory, in Handbook of Child Psychology, ed. P.H. Mussen, 3rd ed. Vol. 1. New York: John Wiley & Sons. p. 110.

experience with the *physical world*, to the *social* and finally to the *ideational* world."[71] In a sense, this pattern, even if not stated in these words, can be seen in any major stage development theory. Bruner[72] for example, states that children move through their development by modes of representation named enactive, iconic, and symbolic.

In terms of cognitive behaviour the sequence, "*doing* to *doing knowingly* and finally, to *conceptualisation*,"[73] has been supported by almost every theory elaborating human development. Therefore it could be argued that not only musical development, but every new area of human knowledge requires from the individual an involvement in those three stages. This proposition can be seen as analogous between the two processes of development - child development and musical development.

In the Spiral Model of Musical Development the 'outside column' reflects the same structure as above.[74] It begins by assuming that the child enters the musical 'world' by mastering some basic musical materials in an attempt to acquire both individual and social feelings of

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[71] Maier, H.W. (1978). Three theories of child development. Washington: Harper & Row Publishers. p. 156.

[72] Bruner, J.S. (1966). Toward a theory of instruction. Cambridge, Mass.: Harvard University Press

[73] Maier, H.W. (1978). op. cit., p. 156.

[74] Further discussion about the analogy with Piaget's stages on Play Development will be pursued in the next chapter.

the possibilities to be explored. A second move by children is towards the imitation of the socially available means of expressing themselves, being socially engaged with the established norms of artistic expression in a specific culture. Imaginative Play is an attempt to explore beyond the simple social cliche commonly established in any cultural setting. Children's drive to change the core of any artistic structure - the form - reflects the above attempt. By the time children have mastered, imitated, and played with the socially established idiom, the Meta-cognition level enables them to transcend the borders of the culturally established idiom. Their value-judgement of a musical world will enable them to transcend mere commercial or idiomatic settings.

Still within the stage discussion, the stage mixture question is also seen as one unsolved problem within the developmental stage tradition. It seems that stage theorists face a problem concerning the appropriate placement for the child in each stage. A person supposedly functions in more than one single stage, consisting in what Turiel[75] calls *stage mixture*. He defines it as being an essential component of any stage theory of development. He also raises an important aspect of stage theories, mainly the lack of clarity on exactly

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[75] Turiel, E. (1969). Developmental processes in the child's moral thinking, in Trends and Issues in Developmental Psychology, eds. P.H. Mussen, J. Langer, and M. Covington. New York: Holt Rinehart and Winston.

which stage the child is in.[76]

> Among stage theorists there is disagreement as to whether it is possible to be in more than one stage at the same time, whether regression to an earlier stage is possible, and what can cause children to differ in how fast they pass through the stages[77].

Among different theories of development (child development, etc.), there are some issues related to the concept of stage. One is the idea that specific stages are linked with age, and the other is the idea of a universality of the process. Although research carried out with children's compositions[78] suggests that different stages of musical responses are associated with specific age, this cannot be taken as a norm. Instead, it can be said that the intention is to demonstrate that there is a temporality issue, meaning that the longer one is systematically engaged with music, the greater the chances of responding to a higher stage. The theory suggests that every child who does begin in the field of music will follow the sequence proposed by the Spiral. The reason why the Spiral Model is to some extent non-age related is because it is believed that different people develop at different speeds, mainly due to the kind of exposure they have throughout their lives, and that cognitive development differs among different ages.

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[76] Lerner, R.M. (1976). Concepts and theories of human development. Reading, Mass.: Addison Wesley Publishing Company. p. 140.

[77] Miller, P.H. (1983). op. cit., p. 22.

[78] Swanwick, K. and Tillman, J. (1989). op. cit.

The assertion of stage theorists that everyone necessarily passes through the same stages - universality of the sequence - is not confirmed in musical development, or in relation to the three parameters (composition performing and listening), or in relation to its applicability in every cultural setting. The concept of universality can easily be dropped in this case, since the cultural scope proposed by this theory is delimitated to western societies.

When Swanwick presented the concept of development most applicable to his Theory of Musical Development, he suggested that "there are cumulative stages through which the musical behaviour of children can be traced."[79] As far as the cumulativity issue is concerned, this has already been discussed. It has also been argued that only the stages constitute a new mode of organisation, while the phases, although also qualitatively different among themselves, account only for different ways of relating to the same dimension of musical criticism. It may be suggested that what Swanwick[80] calls change in musical behaviour relates to the actual phases within each stage - e.g. between Sensory and Manipulative. The difference between responses corresponding, for example, to the Materials stage from ones corresponding to the Form stage, does not denote only a change in behaviour

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[79] Swanwick, K. (1988). op. cit., p. 53.

[80] Ibid.

but also as Green states, denotes "radical transformations and reorganisations of earlier stages into qualitatively different later stages."[81]

2.1.5 - INCREASED CAPACITY FOR SELF-CONTROL

Any developmental theory which accounts for this characteristic implies the notion that, in the course of development there is an increased capacity "to think out solutions to problems and to experiment mentally with ideas before tackling them on a concrete level."[82] In a broader sense, the Spiral Theory of Musical Development predicts that as one develops his/her musical understanding, one is able to respond to music in a more independent way. In other words, one is able to 'create' new musical systems with the capacity of transcending the mere cultural setting of musical idioms.

The more one develops, the more one is able to respond to music in alternative ways, outside of cultural boundaries. This is supported by what Swanwick predicts for the last phase - Systematic - within the Value stage. He states that,

> at the *systematic* level we might think of the highly developed person

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[81] Green, M. (1989). op. cit., p. 17.

[82] Ibid., p. 18.

> able to reflect on and be discursive about his or her musical experience in an intellectually organised way. There may be conscious expositions of the qualities underlying musical experience and an ability to make conceptual maps, which may be historical, musicological, psychological or philosophical. Musical compositions at this level may be informed by research and the study and development of new systems, novel organising principles.[83]

No doubt there is an element of 'self-control', here analogously understood as control over one's musical experience, once one has reached the ultimate stage of musical development. As Green further states, the increased capacity of self-control means more than just conscious control,

> it implies some mechanism that anticipates the consequences of a particular activity, adjusts the activity to the expected outcome, initiates the activity, monitors the consequences as they unfold, and continuously readjusts the activity to achieve planned consequences.[84]

2.2 - CONCLUSION

Throughout this chapter, there has been an attempt to demonstrate that the Spiral Theory of Musical Development can and should be considered a developmental theory due to its strong resemblance with the development

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[83] Swanwick, K. (1988). op. cit., pp. 79-80.

[84] Green, M. (1989). op. cit., p. 18.

paradigm advocated by psychological development theories in general. The use of the five developmental theory criteria (Temporality, Cumulativity, Directionality, New Mode of Organisation, and Increased Capacity for Self-control), reviewed by Green,[85] has allowed the present work to further discuss the developmental adequacy of the Spiral, already implicit in Swanwick's[86] writings.

The empirical evidence that supports the Spiral as being a theory of musical development, comes through the observation of children's musical products (composition in this case). To reach the point of being considered a theory of musical development encompassing the three parameters (composing, performing and listening), it still requires the investigation of the actual psychological process underlying the acquisition of musical knowledge, as well as empirical evidence composed of responses to performing and listening that can be mapped according to the sequence proposed.

So far, it has been demonstrated that the four dimensions of musical criticism proposed by Swanwick[87] do seem to suggest a developmental pattern, which retains some similarities with Piaget's theory on play development in early childhood. As will be discussed in

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[85] Ibid.

[86] Swanwick, K. and Tillman, J. (1986). op. cit.
Swanwick, K. (1988). op. cit.

[87] Swanwick, K. (1991b). op. cit.

chapter three, the development of play has been seen as *analogous* to the process of musical development. Although this is an inadequate explanation, it does represent an important starting point in order to uncover the possible psychological path underlying musical development.

As already emphasised, this work is not concerned with the investigation of the psychological process underlying the acquisition of musical understanding, but rather if the Spiral can be considered a developmental theory and further used as an assessment model, possibly for the remaining two activities (performing and listening). The next task consists of a critical analysis of the terms in which Piaget's theory on play development supports Swanwick's Spiral Theory of Musical Development.

CHAPTER 3: PIAGET'S THEORY AS A PSYCHOLOGICAL BACKGROUND: ANALYSIS OF THE TERMS OF THE ANALOGY

The need to pursue a further investigation of the psychological principles of the analogy between the Spiral Theory of Musical Development and Piaget's theory on play development, lies apparent in the fact that there seem to be certain gaps in the way the Spiral Theory stands today. Since it would be impossible to contemplate every single issue surrounding the psychological background of the theory, this chapter will concentrate on answering two questions: a) Why does Swanwick[1] base the analogy upon the development of play, and so suggests that imitation and imaginative play appear sequentially, when in fact in a Piagetian sense they are seen as a two way process - horizontal and complementary? and, b) On what basis was the psychological process underlying musical development generalised in regards to the remaining activities (performing and listening)?

Before considering Swanwick's analogy, it is of paramount importance to refer to some aspects of Piaget's work. The present chapter does not intend to criticise the principles of Piaget's theory of genetic epistemology

[1] Swanwick, K. (1982). The arts in education: dreaming or wide awake? Special Professorial Lecture, Institute of Education University of London.

and his work on development of play and imitation, but rather to introduce it in order to understand the basis on which the Spiral Theory of Musical Development has been conceived as resembling Piaget's theory on the development of play.

3.1 - COMMENTS ON PIAGET'S THEORY ON PLAY AND IMITATION IN EARLY CHILDHOOD

Piaget's prime concern was with the origin (genesis) of knowledge, offering a theory of how the intellect grows. His work, "whether it be thought of as philosophy, biology, or psychology, is all directed at elaborating a theory of knowledge of how the organism comes to know its world."[2] Piaget's operationalism enabled him to overcome the so called philosophical conflict between rationalism and empiricism.[3]

For Piaget, the important aspect of the acquisition of knowledge lies in the fact that "the individual and the social group are constantly in the process of constructing and reconstructing their views of the world."[4] His notion that knowledge is acquired between

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[2] Gruber, H.E. and Voneche, J.J. (1977). The essential Piaget. London: Routledge & Kegan Paul. p. xviii.

[3] Hargreaves, D.J. (1986a). The developmental psychology of music. Avon: Cambridge University Press. p. 33.

[4] Gruber, H.E. and Voneche, J.J. (1977). op. cit., p. xxvi.

the subject's interaction with the object (child vs environment), leads him sometimes to occasionally call his position constructivism. "Piaget prefers to say that the child is inventing rather than discovering his ideas."[5] This distinction separates him both from empiricism and rationalism, for the simple reason that he neither believes that the ideas preexist out there in the world, nor that the ideas preexist in the mind. Rather they must be constructed by the child through his/her interaction with the environment.

According to Gruber, the main contribution of Piaget's theory of genetic epistemology

> is the discovery that the only way in which we get knowledge is through continual construction, and that we can have no enduring knowledge without actively maintaining this process.[6]

Piaget's theory is greatly based on the idea of intellectual adaptation, and this takes place through the twin processes of assimilation and accommodation. Thus intellectual adaptation, or every act of intelligence, presupposes an interpretation of something in external reality, i.e. assimilating new objects and events in our environment, and at the same time accommodating (adapting) ourselves to these objects or events by

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[5] Ibid., p. xxxvii.

[6] Ibid., p xxii.

changing our ways of thinking about them.[7] Flavell mentions that,

> however necessary it may be to describe assimilation and accommodation separately and sequentially, they should be thought as simultaneous and indissociable as they operate in a living cognition.[8]

Although Piaget argues that assimilation and accommodation constitute the most fundamental ingredients of intellectual functioning, and that they are present in every intellectual act of whatever type and developmental level, the present work will narrow its interest to how these twin processes operate during the sensorimotor stage of development. More specifically, this work is particularly concerned with two important kinds of cognition which do not contain a balance between assimilation and accommodation. The first imbalance activity is play, which can be defined in a broad sense as including all kinds of play and make-believe. The second refers to imitation which includes all kinds of imitative behaviours.[9] Play and imitation are understood as cognitive activities in which assimilation and accommodation are not in balance. As Piaget explains, in play there is "primacy of assimilation over accommodation", in the same way as in imitation there is

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[7] Hargreaves, D.J. (1986a). op. cit., p. 33.

[8] Flavell, J.H. (1963). The developmental psychology of Jean Piaget. London: Van Nostrand Company. p. 48.

[9] Ibid., p. 65.

a primacy of accommodation over assimilation.[10]

Play and imitation are part of the general sensorimotor construction period alongside the specialised intellectual achievements relating to objects, space, causality and time. Each of these special developments is described by Piaget in the framework of six stages of general development. Again the issue under study refers to two sensorimotor developments - play and imitation. As Flavell mentions, "both imitation and play arise almost imperceptibly as separate functions from initial adaptational patterns in which neither can be clearly identified."[11] By the time play and imitation reach stage six, they proceed to interact and complement each other.

It is important to turn to Piaget's book - Play, dreams and imitation in childhood - which is dedicated to the development of representational thought, and more specifically, "to try to bridge the gap between sensorimotor activity prior to representation, and the operational forms of thought."[12] With no doubt, play and imitation assume central roles since, it has been argued by Piaget, that representation derives, to some extent, from imitation and play activities. On one hand,

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[10] Piaget, J. (1951). Play, dreams and imitation in childhood. London: Routledge & Kegan Paul. p. 87.

[11] Flavell, J.H. (1963). op. cit., p. 123.

[12] Piaget, J. (1951). op. cit., p. 1.

imitation is an important source of representation mainly because it provides the necessary imaged 'signifiers'. On the other hand, play

> can also be considered as leading from activity to representation, in so far as it evolves from its initial stage of sensorimotor activity to its second stage of symbolic or imaginative play.[13]

Piaget argues that, from the early play and imitation activities it is possible to trace the transition from sensorimotor assimilation and accommodation to the mental twin processes, which characterise the beginning of representation, resulting eventually in the co-ordination between 'signifiers and signified'.[14] As Gruber states, "play, dreams, and imitation are the means, but the goal beyond them is the growth of the symbolic function."[15]

Throughout his work Piaget describes the six stages of imitation and play. The first stage of imitation is characterised by the way infants imitate through contagion, where the sense of copying someone else is absent.[16] In the second stage there are some sporadic imitations of auditory and tactile-kinethetic models. In stage three there is already the beginning of systematic

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[13] Ibid., p. 2.

[14] Ibid., p. 3.

[15] Gruber, H.E. and Voneche, J.J. (1977). op. cit., p. 483.

[16] Ibid., p. 485.

imitation of sounds and movements and gestures. In stage four there are gross attempts to imitate movements that the child has seen in others but not seen in him/herself.[17] As Piaget emphasises, "direct imitation, through progressive differentiation between accommodation and assimilation, is fully developed in stages IV and V."[18] It is only at stage six that so called "deferred imitation" starts to lead to the beginning of representation. The important characteristic of stage six (deferred imitation) is that the reproduction of the model does not necessarily occur when the model is present, i.e. imitation is no longer dependent on the actual action.[19] As Piaget says, at this stage imitation begins to reach the levels of representation.[20]

The development of play within the sensorimotor stage is also described in the same structure as the six stages of imitation. The only difference is that play is characterised by the primacy of assimilation over accommodation. "Piaget distinguishes three sorts of play: rule games, exercise games and symbolic play."[21] It is symbolic play that has the most interest for the present study. Piaget argues, according to Gruber and Voneche,

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[17] Ibid., p. 486.

[18] Piaget, J. (1951). op. cit., p. 30.

[19] Ibid., p. 62.

[20] Ibid., p. 62.

[21] Gruber, H.E. and Voneche, J.J. (1977). op. cit., p. 486.

that

> symbolic play starts around the last two stages of sensorimotor development when a child begins to apply a sensorimotor schema in the absence of the appropriate object or outside of its habitual context.[22]

However in its initial stages, play is characterised by the pole of behaviours defined by assimilation, which happen to be the converse and complement of accommodation.[23]

Although play and imitation will combine by the time they reach the level of representation, during the sensorimotor stages they are separate and according to Piaget should be studied separately.[24] Piaget points out that it is less difficult to identify the beginning of imitation than it is to define the beginning of play. It is understood that the first stage of play consist of pure reflex adaptations. Or as Flavell summarises:

> the neonate shows at most a kind of functional equivalent of play when it indulges in 'empty', accommodation-free sucking movements (without breast or bottle present).[25]

At the second stage, play seems to assume part of

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[22] Ibid., 486-87.

[23] Piaget, J. (1951). op. cit., p. 89.

[24] Ibid., p. 89.

[25] Flavell, J.H. (1963). op. cit., 126-27.

the adaptive behaviour. All activities, e.g. looking, moving arms, are done for their own sake, and they often appear to be pursued for the simple pleasure of doing so, because "they do not form part of any series of actions imposed by someone else or from outside."[26] At stage three, "the process remains the same, but the differentiation between play and intellectual assimilation is rather more advanced."[27] But it is not until stage four that two new elements of play appear. The first relates to the application of known schemas to new situations, and the second, due to the mobility of the schemas, allow the formation of real ludic combination, the beginning of what Piaget calls 'ritualization' which culminates in stage six.[28] For example, the child encounters some stimuli associated with going to sleep (e.g. pillow), and momentarily goes through the ritual of sleeping.[29] Piaget says that,

> since there was adaptation of the schemas to an external reality, which constituted a problem in previous stages, it can be said that intelligence is present in this kind of action.[30]

At stage five there is a continuation of the ritualization process of the previous stage with the

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[26] Piaget, J. (1951). op. cit., p. 90.

[27] Ibid., p. 91.

[28] Ibid., p. 92.

[29] Flavell, J.H. (1963). op. cit., p. 128.

[30] Piaget, J. (1951). op. cit., p. 93.

difference that at this stage they become games almost immediately.[31] Piaget argues that this process, although corresponding to the development towards symbolism, is not necessarily conscious 'make-believe' as it will be in stage six. Thus, it is only at stage six that symbolization will have a profound effect on play as it did on imitation. As Piaget explains,

> deferred imitation (stage six of imitation) of a new model takes place after the model has disappeared, and symbolic play (stage six of play) reproduces a situation not directly related to the object which gives rise to it, the present object merely serving to evoke an absent one.[32]

Here, there is already symbolism, not only motor play. Thus the child becomes capable of make-believe actions.

All sensorimotor activities are pre-representational, meaning that the evocation of an absent object is not possible until the second year. However at the end of the sensorimotor stage "the child has acquired sufficient virtuosity in the mastery of the imitation thus generalised for deferred imitation to become possible."[33] So, the role of imitation goes beyond its function of accommodatory behaviour.

It constitutes both the sensorimotor

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[31] Ibid., p. 95.

[32] Ibid., p. 98.

[33] Gruber, H.E. and Voneche, J.J. (1977). op. cit., p. 491.

> prefiguration of representation and the transitional phase between the sensorimotor level and the level that may properly be called representative.[34]

The same happens with play. Stage six of play, called symbolic play, is the apogee of children's play.[35] As Gruber summarises,

> symbolic play is not merely an assimilation of reality to the self, as is play in general, but an assimilation made possible (and reinforced) by a symbolic 'language' that is developed by the self and is capable of being modified according to its needs.[36]

The purpose here is not to describe in detail imitation and play as part of the sensorimotor stage and as a bridge to the first manifestation of symbolic function, but to help the reader understand the basis on which a relationship of these functions has been drawn with the Spiral stages of musical development. There is no intention to replicate how Swanwick arrived at the analogy, with the development of play already described in chapter one. Nonetheless it is important now to bring up at least part of the rationale offered by him to support the above analogy.

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[34] Ibid., p. 491.

[35] Ibid., p. 492.

[36] Ibid., p. 493.

3.2 - THE SPIRAL THEORY IN RELATION TO PIAGET'S WORK ON PLAY DEVELOPMENT: A CRITICAL REVIEW

Piaget's theory on development of play has been seen to resemble the process of musical development and provide one of the ways of approaching the problem surrounding the developmental processes of musical understanding. There is one aspect of the Spiral Theory that tries to argue that the arts contribute to the development of mind but not in a sense of some sort of transfer (e.g. the engagement with arts improves reasoning skills, etc.). According to Swanwick,

> unless the arts can be seen to develop mind (in the broadest sense), their function cannot ultimately be understood, nor can their role in education.[37]

Then there is another aspect of the theory which argues that,

> we can come to know and develop our knowing through artistic engagement and that the fundamental processes of mind are similar to those in other forms of discourse.[38]

These two aspects of the theory seem to represent the starting point of the building up of a rationale in favour of the possibility that musical development can be seen as analogous to general cognitive development.

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[37] Swanwick, K. (1988). Music, mind, and education. London: Routledge. p. 36.

[38] Ibid., p. 49.

On the other hand, when Swanwick[39] proposed a relationship between the two processes, he turned to a softer way of relating the development of play with musical development. He did not demonstrate much concern for the psychological processes involved in the *acquisition* of musical understanding, but rather was concerned with the fact that "play, a vital human characteristic, is intrinsically bound up with all artistic activity."[40] Here, perhaps, lies the first slight contradiction in relation to some of his writings, and also with Piaget's theoretical basis as briefly described at the beginning of this chapter. It is quite clear that Piaget's theory is concerned with the origin of knowledge,[41] more specifically with how the intellect grows. Thus, once Swanwick suggests that the processes of assimilation and accommodation can be seen to happen within the stages or even phases of musical development, he must be referring, even if analogously, to the psychological process involved in the acquisition of musical knowledge.

This is reinforced by the way he subscribes to the Piagetian view that the process of imitation and

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[39] Swanwick, K. (1982). op. cit.
Swanwick and Tillman (1986). The sequence of musical development: a study of children's composition. British Journal of Music Education, 3, 3, 305-39.
Swanwick, K. (1988). op. cit.

[40] Swanwick, K. (1988). op. cit., p. 55.

[41] Here to be understood as the acquisition of human knowledge in general.

imaginative play represents the complimentary poles of accommodation and assimilation and so suggests that cognitive and musical development are analogous in this case. There is a clear intention to employ a cognitive development pattern as a means to shed light onto the process of musical development and consequently comes to explain the process in a more objective way. Although not in a very explicit way, the Spiral Theory seems to make an attempt to uncover the underlying psychological processes of the acquisition and development of musical knowledge.

In the Special Professorial Lecture The arts in education: dreaming or wide-awake?, after describing several kinds of play, Swanwick suggests for the first time that there are certainly parallels between play (in its different manifestation), and the arts.[42] These "parallels" are drawn firstly, between mastery (as being a kind of play in early childhood), and musical Materials, secondly between imitation (as being another crucial element of play) and expressive character, and thirdly, between Imaginative Play and Form. He also brings up three possible ways of relating to art: as a former, as a performer, and in audience. Those modes (activities or parameters) of experience, according to Swanwick should be integrated, if arts are to develop the

[42] Swanwick, K. (1982). op. cit., p. 16.

mind.[43]

Here Swanwick is first suggesting a relationship between the dimensions of musical criticism (Materials Expression, and Form), and the forms of play (Mastery, Imitation, and Imaginative Play), and as a consequence of this relationship suggests a sequence in which these dimensions will occur in the development of musical understanding. He also suggests that these three dimensions of musical criticism are common to the three ways of engaging with music. What needs to be clarified is: if Swanwick argues that the development of play is analogous to the development of the dimensions of musical criticism, common to the three musical activities (composing, performing and listening), he is then suggesting that the processes of musical development (analogous to the development of mind), are observable within the three activities. This issue will be dealt with later on in this chapter.

The way in which the argument and discussion proceeds leads to the conclusion that what in a later publication, are called the 'dimensions of musical criticism'[44] (Materials, Expression, Form and Value), are fused with the attempt to explain the psychological

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[43] Ibid., p. 21.

[44] Swanwick, K. (1991b). Musical criticism and musical development. British Journal of Music Education, 8, 139-48.

process of arts development, as analogically related to Piaget's development of play in early childhood. Thus, after the presentation of a theoretical basis based on the idea that the development of play resembles the process of musical development, Swanwick and Tillman[45] present empirical confirmation of the above proposition. The research carried out with children's compositions confirm that "musical compositions of children can be seen to follow a broad sequence of development, through Mastery, Imitation, and Imaginative Play, in that order."[46]

The theory as it stands today, has found empirical evidence to support its claim that there is such a thing as musical development and that there is a clear pattern in which children's composition[47] and even performing[48] proceeds. However, there are still some questions that remain to be answered. These questions relate to two main issues: first, clarification and perhaps extension of the analogous relationship between musical development and Piaget's development of play; second, the suggestion that the remaining activity - listening - would follow the Spiral sequence as composition and performing did. Thus the

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[45] Swanwick, K. and Tillman, J. (1986). op. cit.

[46] Swanwick, K. (1988). op. cit., p. 58.

[47] Swanwick and Tillman (1986). op. cit.
Swanwick, K. (1991a). Further research on the musical development sequence. Psychology of Music, 19, 1, 22-32.

[48] Research findings to be published.

present chapter attempts to answer the two following questions: a) Why does Swanwick base the analogy upon the development of play, suggesting that imitation and imaginative play appear sequentially, when in fact in Piagetian sense they are seen as a two way process - horizontal and complementary? and, b) On what basis was the psychological process underlying musical development generalised to the remaining activities (performing and listening)? The establishment of the above questions, seem inevitable once the value of the analogy of Piaget's Theory on Play Development with the process of musical development is to be considered.

From Swanwick's writings it is possible to recognise that the parallel drawn between psychological processes and arts development was drawn from a specific stage of development, named by Piaget as the sensorimotor stage. In this chapter the word parallel has been substituted for the word analogy for two main reasons: First, because the word parallel implies that between the development of play and musical development every principle is shared, which is not the case as the present work will explain. Second, by using the word analogy, it implies the sharing of some general principles but not necessarily the same deep psychological process.

In any attempt to establish an analogical relationship between two distinct phenomena there is

always the intention to expand the understanding of the related phenomena, in this case musical development. Far from being established for its own sake, analogies carry an implicit view that two or more phenomena bear close relationship among themselves of some of their basic principles. It can be argued that within that frame of understanding this is where the Spiral Theory of Musical Development stands.

So, what are the basic principles of the analogy besides the idea that "play, as a vital human characteristic, is intrinsically bound up with all artistic activity?"[49] Why did Swanwick use imitation and imaginative play in a hierarchic way, and at the same time argue that they represent poles of accommodation and assimilation respectively? As mentioned before, early play and imitation are two of the six functions that develop during the sensorimotor stage, and during that period they are characterised by almost antithetic poles of assimilation and accommodation respectively. It was also stated that their development (both described through six stages) leads to the development of symbolic function (representation). It was with that concern in mind - the development of representation - that Piaget devoted his book Play, dreams and imitation in childhood, to bridging the gap "between sensorimotor activity prior

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[49] Swanwick, K. (1988). op. cit. p. 55.

to representation, and the operational forms of thought."[50]

There is no place in Swanwick's writing where he contemplates the fact that imitation and play, although characterised by polarised functions, develop simultaneously. Rather, he only mentions that imitation is characterised by the primacy of accommodation over assimilation and that imaginative play is characterised by the primacy of assimilation over accommodation. It seems from his writing that imitation (not specifying which stage), precedes imaginative play, and that the whole analogy is made in relation to the development of play. Here are some excerpts from Swanwick about the way in which he approaches the analogy between the stages:

> The impulse towards mastery affects musical activities, e.g. the handling of voices and instruments. ... Control of musical materials pre-supposes a degree of *delight* in sounds themselves. ... Imitation is more obviously present in the arts when they are representational ... when there is reference to events in life, in stories and drama, in poems and painting. ... Musical characterisation is a direct development of the 'let's pretend' quality of imitation in early childhood. ... in Piaget's terminology, imitation - expressiveness in music - is an act of accommodation: to some extent we become like the music, taking on a trace of its feeling qualities, identifying with its postural and gestural *schema*. ... In imaginative play we create a world of new relationships out of the elements around us, behaviour which is essentially assimilatory. Musically speaking, imaginative play has to do with structural transformations, with the novel re-

[50] Piaget, J. (1951). op. cit., p. 1.

constitution of musical possibilities.[51]

In Piaget's theory, is it possible to take the concepts of accommodation and assimilation and place them in a hierarchy as Swanwick did with the Spiral? Is he implying that within the stage of Expression (analogous to imitation, and thus essentially accommodatory), there is no assimilation? Or if there is, does it becomes always subordinated to accommodation? The same kind of question could be posed in the case of the Form stage (analogous to imaginative play, and thus assimilatory). Not intending to refer to the analogy in a simplistic or even in a literal way, the present work seeks to find further clarification of the analogous principles.

From Piaget's description of the development of play, it is true that the first and second stages are characterised by the pleasure of 'mastering', and it is also true that when play becomes imaginative (sixth stage of the development of play), children start to operate in a 'make-believe' world, subjecting things to satisfy their own needs. But how about imitation? When Swanwick, started to argue in favour of an analogy between play and musical development, he introduced imitation by stating that,

> there is, however, another crucial *element of play* (my italics), which is more easily forgotten, being less fashionable in some

[51] Swanwick, K. (1988). op. cit., 55-57.

> educational circles. This Piaget calls *imitation*, and regards it as the opposite of imaginative play.[52]

It is important to clarify at this point that imitation is not an *element of play*, but rather an element that develops concomitantly with play towards the development of the symbolic function.[53] On the other hand Swanwick is right when he states that imitation lies at the opposite end of imaginative play regarding the poles of accommodation and assimilation. And it seems that this is the aspect of the analogy that Swanwick is most concerned with.

The one problem with the term *imitation*, is the fact that it should not be taken as a single unity due to the radical process of transformation that happens within this level. All of the first five stages of imitation are pre-symbolic functions. The appearance of semiotic function starts with Deferred Imitation (stage 6). Simultaneously, the child starts to communicate by means of symbols, and becomes capable of starting to distinguish between signifier and signified. Deferred imitation constitutes the beginning of representation, and the imitative gesture the beginning of a differentiated signifier.

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[52] Swanwick, K. (1982). op. cit., p. 16.

[53] This is recognised by Professor Swanwick in subsequent publications.

In this regard, what stage of imitation is Swanwick referring to? The use of imitation in this context makes it necessary to contextualise its meaning, its reference to some stage, and not take imitation as a whole as meaning simply the primacy of accommodation. From Piaget's writings, it is less likely that Swanwick is referring to the first five stages of the development of imitation, because despite the fact that deferred imitation (sixth stage) seems to occur at the same time as symbolic or imaginative play, in play development Gruber states that "symbolic play, with its emphasis on make-believe, supposes deferred imitation of actual behaviour patterns."[54] Thus it seems that the kind of imitation Swanwick refers to concerns the sixth stage (deferred imitation), which implies that the reproduction of the model does not occur when the model is present, i.e. imitation is no longer dependent on the actual action.[55] It seems that for Swanwick, imitation as it was conceived, refers to 'representative imitation'. He supports this view by stating,

> musical characterisation is a direct development of the 'let's pretend' quality of imitation in early childhood. ... to some extent we become like the music, taking on a trace of its feeling qualities, identifying with its postural and gesture *schema*.[56]

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[54] Gruber, H.E. and Voneche, J.J. (1977). op. cit., p. 486.

[55] Piaget, J. (1951). op. cit., p. 62.

[56] Swanwick, K. (1988). op. cit., p. 57.

When Swanwick writes about imaginative play it is easier to identify its relationship with Piaget Theory than it was with imitation. In Piaget's writings, imaginative play (synonymous to symbolic play), is the sixth stage of the development of play which consists of the apogee of children's play. This is when there occurs a transformation from simple motor play to symbolic play, where the child becomes capable of make-believe actions. When Swanwick, states that "musically speaking, imaginative play has to do with structural transformations, with the novel re-constitution of musical possibilities,"[57] it is clear that the stage of play he is referring to is definitely the sixth stage of the development of play.

As an overall evaluation of the Spiral Theory of Musical Development, it can be said that the analogy between the musical criticism dimensions and the developmental process of imitation and play can be sustained, though in a limited way. It can be said that Swanwick's analogy regarding the psychological processes of Mastery, Imitation and Imaginative Play, was taken in a very broad way expressing the poles of psychological 'concentration' in each level. On the other hand, the disadvantage of such a broad analogy is that it fails to engage in discussion regarding the actual psychological processes involved in the acquisition of musical

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[57] Ibid., p. 57.

knowledge of each parameter (composing, performance and listening), which will later constitute the second part of the criticism of Swanwick's theory. But first, in an attempt to take the analogy a step further, let us consider what may be drawn out of the psychological processes of assimilation and accommodation.

3.2.1 - THE RELATIONSHIP BETWEEN ACCOMMODATION AND ASSIMILATION PROCESSES AND THE PHASES OF THE SPIRAL THEORY OF MUSICAL DEVELOPMENT

Having considered that the relationship between Mastery, Imitation and Imaginative play, and the dimensions of musical criticism - Materials, Expression and Form - are appropriately stated and that they can be hierarchial having a function of stages of musical development, what would be the role of the Spiral phases? Is it possible to find any relationship between the two polarised functions named assimilation and accommodation, and the phases that are encompassed by each stage (left and right-hand phases of the Spiral)?

Swanwick acknowledges that there are still "unanswered psychological questions, waiting to be addressed, especially that of the relationship of

accommodation and assimilation within the model."[58] It seems that he suspects that a closer analogy between assimilation and accommodation could be found between the phases, or in his terms between the left and right hand side of the Spiral, rather than between the stages. In order to do that, there is a need to consider not only the development of play, but also the development of imitation in the way Piaget describes it - as functions that develop concomitantly.

During the sensorimotor period there is no sign of children's adaptation being greatly characterised by the unbalanced relationship between assimilation and accommodation. It is only at the end of the sensorimotor activity that the child reaches a higher level of equilibrium between the two functions. In Piaget's view, sensorimotor intelligence consists of,

> the development of an assimilating activity which tends to incorporate external objects in its schemas while at the same time accommodating the schemas to the external world. A stable equilibrium between assimilation and accommodation results in properly intelligent adaptation.[59]

It has been advocated by Swanwick that the left hand side phases correspond to a more idiosyncratic/egocentric way of relating to music. Within the left hand side are

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[58] Ibid., p. 83.

[59] Piaget, J. (1951). op. cit., p. 5.

phases such as Sensory, Personal Expressiveness and Speculative, which share common characteristics despite being phases belonging to different stages of musical development. That is, the objective reality is transformed to suit children's musical expectations, (especially as far as composing and performance are concerned). In Piagetian terms, this way of relating to an object corresponds to what he calls *assimilation*. For example, at the Sensory phase, different objects are often taken as musical instruments, because the concern is with sounds resulting from direct and almost indiscriminate manipulation. Musically speaking the exploration appears to be at random and with little association to the expressive characterisation or even to a structural relationship. Having mastered the materials (after the Manipulative phase), the next step is to try to find out what effect these have in terms of expressive gestures.

In the Personal Expressiveness phase, the expressive gesture is assimilated by the child in a very spontaneous manner so to suit his/her desire to be in control of a medium of expression. Within the Form stage, the Speculative phase, though more sophisticated in musical terms, it also shares some common characteristics with the previous left hand side phases. Here the structure of the music is the object of attention i.e. the child is concerned with different ways of organizing the musical

discourse.

Without intending to draw parallels between the assimilatory function and the left hand side phases of the Spiral, it is possible to see that each of these phases, although different in their musical complexity, share a common principle of transforming what is out there to benefit his/her own musical 'reality'. On the same basis it can be stated that there are some shared principles with the process of accommodation and the right hand side Spiral phases.

Swanwick, has argued that there is a swing between left and right hand of the Spiral, and it may be that this relationship is a sign of this deep dialectical process.[60] It has been argued that the left hand side is characterised by an egocentric way to relate to the musical object, while the right hand side consists of a move towards social sharing. Hence the possibility to analogously relate to the process of accommodation where the paramount object is to adapt the self to reality.[61] The Manipulative, Vernacular and Idiomatic phases, although concerning different stages of musical development, do share the common accommodatory principle. In the Manipulative phase the child begins to 'imitate', or accommodate its musical explorations to common musical

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[60] Swanwick, K. (1988). op. cit., p. 83.

[61] Flavell, J.H. (1963). op. cit., p. 66.

materials features such trills, scalic patterns, etc. The attention is concentrated on accommodating a child's range of materials exploration to the possibilities that specific musical instruments offer.

At the Vernacular phase, the attention turns to the established musical conventions, i.e. "children have entered the first phase of conventional music-making."[62] Again, the accommodatory nature of their musical making is manifested through the way children's compositions (and/or performance and listening) appear to be predictable, where "sometimes existing melodies are produced as though they were the child's own creation."[63] At the Idiomatic phase, the prime concern is not only with the Materials and Expression, but how specific musical idioms are structured. When composing, the created structural surprises become more integrated into a recognisable style (e.g. pop, classical, etc.).[64] The same can be said in the case of listening in audience and performance, where there is a tendency to conform or recognise a specific musical discourse as belonging to a particular idiom or style. As in the previous phases - Manipulative and Vernacular - there is a need to conform to external models, or imitate (accommodate to)existing musical practices.

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[62] Swanwick, K. (1988). op. cit., p. 78.

[63] Ibid., p. 78.

[64] Ibid., p. 79.

In the way the above extended analogy has been pursued, i.e. by establishing a relationship between the poles of assimilation and accommodation and the left and right hand phases, it seems that the analogy has been directed to the development of representation, where play and imitation, seen as polarised functions, would develop until an equilibrium between the two functions is reached. According to Piaget's theory this happens when the child (around the second year), is capable of differentiating signifiers from signified. The establishment of an analogy between those two 'worlds' namely the development of representation in early childhood and musical development, would at least have one thing in common: that play and imitation with their primacy of assimilation and accommodation respectively, work as complimentary functions towards the development of representation (symbolic function). In other words, how one gets to a point of being able to manipulate symbols common to a specific reality, or in Piagetian sense, be able to distinguish between signifiers and signified.

On the other hand, the establishment of an analogy between musical development and the development of representation presents some problems which are impossible to deal with in the scope of this work. A brief example of some of the difficulties lies in the fact that in order to deal with the development of

representation (symbolic function), it involves discussions about the appearances of mental image, verbal evocation, and graphic image, behaviours which, according to Piaget, appear almost simultaneous with deferred imitation and symbolic play. It also involves further analysis of the internal developments of play and imitation within their six stages, which leads the work to the establishment of parallelism, an attitude that contradicts the purpose of this work. Nevertheless, the development of representation does seem to offer a possibility for further investigation of the psychological processes underlying the development of musical understanding. However, this alone would constitute a thesis in itself.

What is important in this extended way of looking at the processes of accommodation and assimilation and the phases of musical development, is that it offers the possibility of coming a step closer towards uncovering some possible underlying psychological process of musical development, and nothing else. Since the present analysis has always been directed towards analogous relations, it cannot be considered as a sufficient explanation of the cognitive process of the acquisition of musical knowledge. As far as the present chapter is concerned, it does not aim to offer answers to all unanswered questions surrounding the Spiral Theory of Musical Development, but rather to call attention to certain issues that could be

addressed in other studies. This was the prime aim of further investigating the possibility of employing the assimilation/accommodation model to the Spiral phases.

The swing from the left to right phases within each stage of the Spiral is certainly an important issue that should not be ignored. They are definitely complimentary, and the failure to perceive them as so would result in a 'musical disequilibrium'. A music education which emphasises only the left hand side would, according to Swanwick, be emphasizing individual creativity: in other words, concentrate its focus on Sensory delight, self-expression, and speculation of available musical forms. On the other hand, music education practice that emphasises the right-hand side would be "stressing manipulative or technical ability, a grasp of the vernacular conventions of music-making and idiomatic or stylistic authenticity."[65]

3.3 - RELATIONSHIP BETWEEN THE SPIRAL PSYCHOLOGICAL BACKGROUND AND THE THREE MUSICAL ACTIVITIES - COMPOSING, PERFORMING, AND LISTENING

So far the present chapter has attempted to analyze the terms in which the analogy was conceived as well as attempt to offer a further possibility to look at the

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[65] Ibid., p. 83.

Spiral phases in relation to accommodation and assimilation processes. The work will now attempt to discuss the issues concerning the generalization of the analogous psychological processes underlying the development of musical understanding to the remaining activities (performing and listening in audience).

When Swanwick[66] finally established the analogy between musical development and Piaget's development of play he argued that,

> this theoretical starting point allows us to interpret the musical products of children in a developmental way. The musical compositions of children can be seen to follow a broad sequence of development through mastery, imitation and imaginative play, in that order.[67]

From his writings it is possible to see that Swanwick turns, once more, away from the problem of how children acquire musical knowledge, and emphasises instead that children's musical *products* (in this case compositions) can be seen to follow a broad sequence of development.

In one way the theory is concerned with musical development (i.e. how children develop their musical understanding), but tends to ignore not only the *subject* who produces this composition or demonstrates a specific

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[66] Swanwick and Tillman (1986). op. cit.
Swanwick, K. (1988). op. cit.

[67] Swanwick, K. (1988). op. cit., p. 58.

musical understanding, but also the *means* (e.g. composing) through which the subject acquires and demonstrates this understanding. At a first look, it seems a favourable turn away from the psychological issues involved in the acquisition of musical knowledge. However it leaves some gaps, some of which cannot be ignored. This is simply because if there is a musical product, e.g. composition, or performance or listening criticism, the *subject* as well as the *means* are necessarily behind it. It is even possible to take this discussion further by questioning to what extent there is a need to establish an analogy between musical development and a particular cognitive developmental process (in this case Piaget's theory on play development), if the subject and the means are ignored?

In fact, Swanwick did not totally ignore the subject's psychological process because he clearly states that,

> we can come to know and develop our knowing through artistic engagement and that the fundamental process of mind are similar to those of other forms of discourse.[68]

This seems to be the main reason why Piaget's theory came to be applicable to this theory. But then, why at the end state that "musical compositions of children can be seen to follow a broad sequence of development through

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[68] Ibid., p. 49.

mastery, imitation and imaginative play, in that order,"[69] instead of 'children seem to develop their musical understanding through a broad sequence ...', meaning in this case through Spiral stages and phases. The answer to this question lies obviously with the author of the theory. This thesis can only point out some seemingly contradictory aspects.

By withdrawing the subject from the musical development scene it seems almost impossible to establish an analogous relation not only with play development in general, but also between the process of accommodation and assimilation and the Spiral phases. According to the analysis established it is possible to see that what 'assimilates and accommodates' are not children's musical compositions, but rather children *through* their musical compositions. In other words, when the child appears to be at the sensory phase he/she assimilates the musical stimulus into his/her level of musical understanding. And this process happens presumably regardless of its means - composing or performance or listening.

So, what is the function of the musical activities in relation to the development of musical understanding? Does every musical activity lead someone to the same musical understanding? In terms of how musical knowledge is acquired through the three activities one could

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[69] Ibid., p. 58.

suggest the following: First, that the composing activity constitutes the best way of acquiring musical knowledge because one is able to make more decisions - one actually transforms the object. Second, that a performing activity offers more limitations, because one may have views about how the music should sound, but there are limitations as to how he/she can change the course of the musical discourse. Third, through listening in audience, one has even greater limitations. The listener has no chance of transforming the object itself, but in a sense has even greater possibility to opt for a specific kind of musical perception, e.g. referentialist, formalist, etc.

To continue this discussion, it is of paramount importance to recall some of Piaget's principles. As mentioned in the beginning of this chapter, Piaget is interested in how the intellect grows, that is, how we acquire knowledge. It was also mentioned that he opposes the rationalist view that an infant is born with a set of innate ideas, and also the empiricist view that knowledge results from the accumulation of experience. Out of that he proposes that knowledge is acquired between the interaction of the subject-object. Within that framework, is it possible to say that Piaget's principles can be observed in all three musical activities? In a sense that is the case of composing and performing. How about listening in audience? To what extent can someone manipulate the 'musical object' when listening?

Certainly, there will be no objective transformation of the musical discourse in a listening experience. On the other hand, even listening requires from the listener a kind of construction which will be directly linked to someone's musical understanding. As opposed to language with its fixed connotation and denotations, a musical discourse does not offer direct means of a common, standardised interpretation. Rather it leaves room for numerous different understandings, and this may be closely linked with someone's degree of musical development. Thus, by taking this rather 'open ended' path to understand a listening experience, it is possible to suggest that even listening activity requires from the subject a kind of assimilation and accommodation process towards the development of musical understanding.

In a sense, a theory of musical development should contemplate the issues involving the means through which musical knowledge is acquired. In the case of musical development, is it possible to assume that one develops musical understanding only through composing, or performing or listening? Or instead, do they necessarily have to be integrated in the curriculum? Is there interaction between them in the development of musical understanding? It seems neither one nor the other, because in fact there are not sufficient studies in this area to support either claim. Although music educators, especially in Britain, have been concerned with

advocating that children should have the opportunity to experience music through the three parameters or activities, none of them have been concerned with investigating if all three activities are really important in order to develop a child's musical understanding.

Through the re-examination of the Spiral Theory of Musical Development, e.g. its musical criticism dimensions and psychological background, it is possible to see the model as encompassing different functions. First, the model can be seen as a *musical criticism model*, because it proposes four musical dimensions - Materials, Expression, Form and Value - as being the ways through which musical criticism can be made. Second, it can be understood as a *developmental model* once it is argued that not only do these dimensions develop in the above order, but also that they analogically relate to Piaget's Development of Play in early childhood. If the model predicts the dimensions of musical criticism, and demonstrates empirically that they develop through a specific pattern, it is possible to suggest that the Spiral is an *assessment model*, capable of assessing children's musical understanding. But musical understanding through which way of relating to music? Despite the fact that so far there is empirical evidence only from composing,[70] Swanwick in his 1988 publication,

[70] Research carried out in performance assessment is being published.

suggests that the Spiral could be used as an assessment model for the three parameters or musical activities - composing, performing, and listening in audience.

There is little doubt that Swanwick's concerns include the assessment in music issue, i.e. the setting up of clear criteria capable of being used for composing, performing, and listening. For music education, one of the most important issues besides the psychological process underlying the acquisition of musical knowledge, is how this musical knowledge can be assessed through any activity. So, when Swanwick came to describe the possible grade-related criteria for composing/improvising and listening,[71] he predicted children's understanding of the same musical "concepts" (loudness level, timbre, mood, etc.) but found they differ in a sense of how they are acquired or even approached. For example, at the Sensory phase - through composing - the child is able to 'manipulate basic musical materials' such as tone colour, loudness, etc., while through listening the child 'perceives' the difference in loudness levels, "obvious changes of tone colour and texture."[72]

Throughout the description of the phases it is possible to see that what remains the same are definitely the kinds of features that are characteristic of each

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[71] Ibid., 152-54.

[72] Ibid., p. 153.

dimension of musical criticism (Materials, Expression and Form), but Swanwick did not consider the psychological ways in which musical understanding is acquired through each activity, and whether or not these are in accordance with Piaget's accommodation and assimilation model. Rather, he seems to have changed only the terminology of acquisition for the same musical dimensions. For example, in composing, the child 'manages', 'controls', etc., while in listening the child 'identifies', 'describes', etc. Thus in psychological terms, the way one approaches music differs significantly and the task to uncover its principles is far from simple.

From the analysis of Swanwick's (1988) criteria, it is possible to see that he is ultimately concerned with the musical criticism model and how to transform it into an assessment model capable of being used for the three musical activities. The reason why part of this thesis has been devoted to critically analyzing part of the psychological background of the Spiral Theory, is to bridge the gap between the musical criticism and the assessment model. This is simply because in order to establish a clear assessment model it is important to verify whether a specific criterion is set up in a developmental way, and thus a path through which children can develop their musical understanding. Thus once it contemplates a developmental pattern, it obviously implies that there is some underlying psychological

process through which children approach music.

It would seem pretentious in this thesis to investigate how one develops musical understanding through listening in audience. Instead, what seems most important is to verify if the Spiral can be used as a model (criteria) to assess listening in audience responses. If by any chance this is confirmed, the next step would perhaps consist of the investigation of the interdependency of the three activities.

3.4 - CONCLUSION

Throughout this chapter there has been an attempt to critically analyze the way in which an analogy has been drawn between musical development and Piaget's theory on the development of play. It is clear that there are still some unresolved problems regarding the psychological background of the Spiral Theory. These are mainly related to the fact that although musical development can be seen as analogous to the development of play, it does not explain a long standing problem within this field of study - the psychological process of musical knowledge acquisition.

On the other hand there are some convincing elements about the analogy sufficient enough to validate the

relationship established with Piaget's theory on play in early childhood. These refer mainly to the relationship between the Spiral phases and the accommodation and assimilation process. Despite the fact that it has been only briefly considered, it is possible to conclude that the assimilation/accommodation model comes to reinforce the need for a balance between the left and right hand side of the Spiral within the process of musical development.

After reviewing the Spiral's psychological background concerning its developmental adequacy, and its nature of analogy to the development of play, it is possible to consider the Spiral a musical mind model good enough to be used across the three activities (composing, performing, and listening in audience). This confirms the choice of the Spiral, made in chapter one, as being the first musical development theory which attempts to describe the trajectory of how people come to understand music within a framework of four dimensions of musical criticism.

At this point, the concern of this thesis turns to the investigation of whether children's responses made through listening in audience can be mapped according to the Spiral sequence, thus validating or not the Spiral as an assessment model capable of being used for the three musical activities - composing, performance and

listening in audience.

CHAPTER 4: RESEARCH DESIGN

Chapter one began by presenting listening as the only activity that permeates any experience one may have with music, and *listening in audience* as being an independent activity alongside composing and performing. In that same chapter, the views of Brian Loane, who does not see listening as independent from composing and performing were presented. What remains to be asked is whether Loane's classification is based on empirical or philosophical premises.

As far as music education is concerned, listening in audience is not only an activity which is encouraged as independent from composing and performing, but also as an important means of assessing children's musical understanding. This is confirmed not only by a majority of the musical education practices in this country, but also in the case of national examinations such as GCSE, where a child's ability to make musical criticism through listening in audience is assessed through specially designed grade related criteria.

Under these circumstances, is it possible to underestimate listening in audience as an activity that may present its own pace of development, and thus work alongside composing and performing? This work subscribes

to the view that listening in audience should not only be worked separately (although integrated with composing and performing), but also be considered an important means of assessing a child's level of musical understanding.

From a brief review of some research carried out in the field of musical development in general, and listening in audience in particular, it is possible to see that there is still much work to be done before any conclusion can be reached regarding the psychological process surrounding the act of experiencing music. The Spiral Theory of Musical Development has been taken as the most appropriate theory and model capable of being used to assess a child's musical understanding across the three musical activities, due not only to its developmental adequacy, but also because it presents a theoretical framework based on psychological principles.

The problem facing research in listening in audience is not restricted only to a presence or absence of a theoretical framework to guide researchers. There is also a need to improve the way in which methods and instruments of measurements have been used to obtain valid and reliable information about the way people respond to music through listening in audience.

From a review of the literature, it is possible to see that the tradition of assessing children's responses

through listening in audience has mostly been based on experimental design (e.g. psychometric approaches), or through structured questionnaires, offering serious limitations regarding the scope and depth in which data is acquired. This is confirmed by Bresler and Stake, when they state that "the first decades of research in music education, much as in general education, were characterised by adherence to quantitative methods."[1] Hargreaves also mentions that "the actual techniques of measurement that have been used in the assessment of responses to music are essentially standard tools of psychometrics."[2] Among those it is possible to find discrimination tests, attitude scales, paired-comparisons, rating scales, behaviourial measures, among others.

Despite the fact that most studies within the psychology of music are carried out independently and some of them are unrelated, they do seem to have a common general aim: to investigate the psychological processes involved in the act of experiencing music. The apparent difficulty in connecting the results of those studies into a broad framework of musical development lies in the fact that most studies have concentrated on the investigation of particular skill, e.g. melodic, and/or

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[1] Bresler, L. and Stake, R.E. (1992). Qualitative research methodology in music education, in Handbook of Research on Music Teaching and Learning, ed. R. Colwell. MENC. New York: Schirmer Books. p. 79.

[2] Hargreaves, D.J. (1986). The developmental psychology of music. Avon: Cambridge University Press. p. 109.

harmonic perception, sometimes losing the perspective that concomitant to the development of melodic perception is a rhythmic one, and more generally that different dimensions of musical criticism are perhaps being developed at the same time. Nevertheless, to some extent, they need to be seen as complimentary rather than reflecting independent views of the subject. Thus, every research enterprise in musical development in general, and listening in audience in particular, can be seen as a building block to the whole edifice of research findings into the field of musical development.

In order to improve assessment techniques particularly in listening in audience, it becomes necessary, primarily to determine the scope of what constitutes musical understanding. Unless there is a theoretical framework about the nature of musical experience underlying such researches, efforts to develop a means of assessing children's musical understanding are going to remain fragmentary.

As far as the present study is concerned, it is of paramount importance to develop a holistic method in order to investigate if children's responses can be mapped according to Swanwick and Tillman's Spiral Model. This is mainly due to the fact that the Spiral Theory predicts a wide range of musical behaviours as opposed to many previous studies which concentrated their efforts on

finding out how people develop a particular skill, e.g. pitch, harmonic, tonal, stylistic discrimination, and so on.

In order to approach the task of measuring children's responses to listening in audience across ages, verbal and non-verbal instruments are necessary tools within a holistic methodological framework. This chapter aims to set up a method used to investigate if responses made by children through listening in audience can be mapped according to the Spiral sequence of musical development.

4.1 - METHOD

The previous Section has outlined the manifold problems surrounding the assessment of musical understanding through listening in audience. The choice of the interview as one of the most appropriate techniques to research listening in audience responses, was necessitated in order to develop a holistic approach to measure children's musical responses through listening in audience.

Why holistic? Because as was previously outlined, the tradition of assessing children's responses through listening in audience was mostly based on experimental

design (e.g. psychometric approaches), or through structured questionnaires, semantic differential scales, etc., offering serious limitations regarding the scope and depth in which data was acquired.

The advantage of using an interview technique to obtain information about children's responses to music is that it allows for greater depth than any other method of data collection,[3] since it encompasses the possibility of employing both qualitative and quantitative methods of data gathering and data analysis. As Hyman highlighted, "the interview by definition, belongs to a class of methods which yield subjective data, that is, direct descriptions of the world of experience."[4] Due to the nature of the technique, there is a possibility of extracting information consisting of a greater interaction with the subject.

The interview technique may be used as the principal means of gathering information or in conjunction with other research methods.[5] Although the interview has been considered the most appropriate technique to be used in this research, it presents the disadvantage of being prone to subjectivity and bias from the part of the

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[3] Cohen, L. and Manion, L. (1985). Research methods in education. 2nd ed. London: Croom Helm. p. 292.

[4] Hyman, H.H. (1975). Interviewing in social research. London: The University of Chicago Press. p. 15.

[5] Cohen, L. and Manion, L. (1985). op. cit., p. 292.

interviewer. These should be recognised and controlled.[6] In this sense it is important to be aware of the kind of interview one chooses to conduct (structured, semi-structured, or non-structured), as well as what would constitute a biased situation within a specific field of inquiry. This point will be further discussed later.

Due to the nature of the research, age range of the subjects, and the amount of subjectivity involved, two kinds of interviews were employed: the structured and the semi-structured. The interview technique normally implies the use of a verbal question and answer. In the present case there was a need to offer children different means through which they are able to respond. The decision to employ different tools besides the verbal[7] ones within the interview technique was based on the fact that the age range of the population varied from 5 to 14 years-old. The rationale has to do with the fact that younger children normally present a limited range of vocabulary or even a limited verbal capacity to express themselves. At specific ages, children have language limitations and this can very easily misrepresent their capacity for intellectual thinking. For that reason it was decided that the use of verbal as well as non-verbal tools of collecting data (Figure 4.1), would increase the internal

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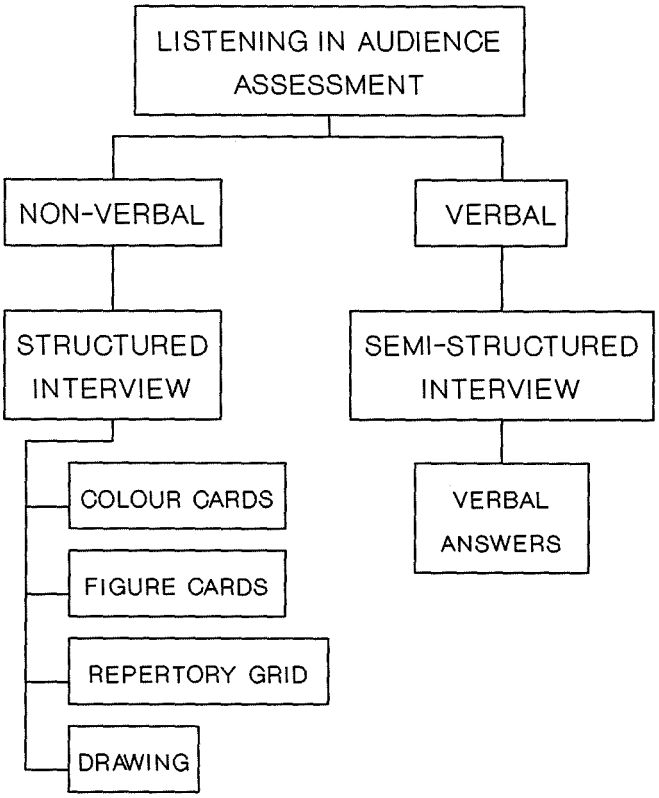
[6] Ibid., p. 292.

[7] Verbal responses refer to the section where children have to talk about what they have listened to (semi-structured interview).

validity of the present method.

Figure 4.1: **METHOD STRUCTURE**



Since the problems surrounding the mapping of musical responses are manifold, it can be said that the use not only of different kinds of interviews, but also the use of different instruments of eliciting responses, is essential. A qualitative (semi-structured) interview , is necessary and relates to the fact that although there is an element of 'input' (musical extracts), there is a great degree of unexpectancy. Not only are the questions

open-ended, but the range of questions will vary slightly according to the content of children's answers.

The interview consisted of questioning children about what they had listened to. For each musical extract a set of questions was asked. In the case of the semi-structured interview some of the questions were formed based on the answers of the student. In other words, the number of questions is determined by the kind of interview, structured or semi-structured, and by the relationship between the interviewer/interviewee. The two kinds of interviews - structured and semi-structured - chosen as the most appropriate techniques to investigate children's responses to music through listening in audience, will be described subsequently.

4.1.1 - STRUCTURED INTERVIEW

Within the structured interview there are different items used in the construction of schedules. In this case the one chosen was the "fixed-alternative" item, in which the respondent chooses from two or more alternatives offered. In other words, questions have to be made in a standard sequence, and answers have to be delimitated as well. The structured interview implies that the contents and procedures are organised in advance and are

characterised by a closed situation.[8] Questionnaires are the most common example of a structured interview. In this case the researcher has little freedom of action to change things such as, the kind of question sequencing. An example of questions in this case would be: "which of the colour and figure cards would you choose to describe the music?". Not only is the question structured but the alternatives are limited - e.g. "x" number of cards possibilities.

As was mentioned before, it is of paramount importance to use non-verbal tools in order to allow children to answer questions by other than verbal means

In this case, it was thought appropriate to use icon cards (colour and figure cards), through which children could respond by choosing the ones that appear to be appropriate in order to answer the question proposed; a drawing section where children have the opportunity to represent the music they have listened to; and a modified form of grid technique where children are asked to cluster music by similarity and difference.

Besides the fact that the above tools will enable children to communicate through non-verbal means, the use of colour as well as figure cards and drawing also plays an important role as a memory aid. After every three extracts, children will be asked to choose the most

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[8] Cohen, L. and Manion, L. (1985). op. cit., p. 293.

different music of each set - the 'odd' one out. These tools are described in detail in the section dealing with method.

4.1.1.1 - COLOUR CARDS

The use of colour cards as part of the structured interview was intended (perhaps naivly), to offer children the possibility of responding by non-verbal means in terms of Materials involved in the music. By using different colour gradation (Appendix 2), it was intended to offer children the possibility of demonstrating their capacity for responding to different musical tone colours as well as levels of loudness between different extracts.

The use of colour cards as a means to represent specific responses has been used in many areas including medicine. Authors such as Scott,[9] used colour sheets among other instruments to investigate children's associations between specific pain and different colours. The results have shown that "red or warm colours were chosen somewhat more often in connection with pain from a hammer than from a needle." The association between colours and different degrees of pain has also been

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[9] Scott, R. (1978). "It hurts red": a preliminary study of children's perception of pain. Perceptual and Motor Skills, 47, 787-91. p. 789.

demonstrated in an early work done by Coriat,[10] where hollow pain was associated with blue, sore pain with red, and superficial headache with white.[11] In the field of musical listening, many studies have been concerned with investigating the degree in which people associate specific music with colours, among them are Hair,[12] Wexner,[13] and Odbert.[14] Wexner, for example, found that certain colours are more easily associated with a mood than others, or as she states, "red is more often associated with exciting-stimulating, blue with secure, ... and yellow with cheerful-jovial-joyful."[15]

Since studies in music using colour were mainly used to find out the level of association of specific music with the mood represented, it remains to be seen whether or not different colour shades can be associated with one or more musical features, including the level of loudness and timbre changes (tone colour).

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[10] Coriat, I.H. (1913). An unusual type of synaesthesia. Journal of Abnormal Psychology, 14, 8, 109-112.

[11] Scott, R. (1978). op. cit., p. 788.

[12] Hair, H.I. (1991). Color and word associations with music. Canadian Journal of Research in Music Education, Special ISME Research Edition, 33, 37-43.

[13] Wexner, L.B. (1954). The degree to which colors (hues) are associated with mood-tones. The Journal of Applied Psychology, 38, 432-35.

[14] Odbert, H.S., Karwoski, T.F. and Eckerson, A.B. (1942). Studies in synaesthetic thinking: musical and verbal associations of color and mood. The Journal of General Psychology, 26, 153-173.

[15] Wexner, L.B. (1954). op. cit., p. 434.

4.1.1.2 - FIGURE CARDS

The use of figure cards (Appendix 3), was intended to offer children a means of demonstrating their capacity to respond in terms of expressive characterisation. The four figure cards were drawn in such a way that would allow the researcher to find out if children were able to differentiate a musical extract as being active or passive. Two cards of each dimension were presented to children. Cards one and two represent *active* figures while cards three and four represent *passive* ones.

Previous research in the field of psychology of music, such as Dolgin and Adelson, has already employed the use of schematic drawing (figure cards) to investigate age changes in the ability to interpret affect in music. This research used four schematic drawings each representing one emotional state - happy/sad and angry/frightened. The testing procedure consisted of presenting children ages 4-9, with sixteen monophonic melodies. For each melody, children had to choose the drawing that depicted the emotion represented in the music. The results have indicated that "even preschoolers can frequently recognise the emotional quality of melodies."[16]

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[16] Dolgin, K. and Adelson, E. (1990). Age changes in the ability to interpret affect in sung and instrumentally-presented melodies. Psychology of Music, 18, 1, 87-98.

In the present research the use of figure as well as colour cards as a memory aid was also thought to help the child to differentiate between the extracts when after every three extracts he/she is asked to choose the 'odd' one out. The question preceding the child's choice of figure cards was: "which of the figure cards would you choose to describe the music?" For each piece of music, only one card should be chosen.

4.1.1.3 - REPERTORY GRID TECHNIQUE

The decision to use a modified form of repertoire grid technique originated from Kelly Personal Construct Theory,[17] came from the supposition that its principles analogously relate to what the present work aims to investigate. In other words, it intends to find out the way children construct their musical world at different ages, i.e. on what do they concentrate their attention, and how do they make sense of what they are listening to. Its use as a part of the structured interview is supported by Fransella and Bannister, when they state that "the grid is perhaps best looked on as a particular form of structured interview."[18]

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[17] Kelly, G. (1991). The psychology of personal constructs. Vols. 1 & 2. First published in 1955. London: Routledge.

[18] Fransella, F. and Bannister, D. (1977). A manual for repertory grid technique. London: Academic Press. p. 4.

The Personal Construct System is based on the way an individual constructs life experiences. Kelly's primary focus was upon the way an individual constructs his environment, (*the way one listens*), the way one interprets what one perceives (*in music through which dimension? Materials, Expression, and Form?*), and as a consequence, the way in which one behaves towards it (*responds to music*).

Kelly calls his philosophical position "Constructive Alternativism" which implies that everything we believe to exist appears to us the way it does because of our constructions of it.[19] Thus, man comes to know something about the universe only in so far as he can make interpretations of it, and approaches an accurate awareness of events by successive approximations.[20] The fundamental postulate of Kelly's theory is that a person's processes are psychologically channelled by the ways in which he/she anticipates events. According to Bannister and Mair,

> his philosophical position led him to assume that events themselves do not imply their own meanings or classifications but that events can be appreciated, appear meaningful and be classified only in so far as a person has erected constructions to subsume them.[21]

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[19] Bannister, D. (ed) (1977). New perspectives in personal construct theory. London: Academic Press.

[20] Bannister, D. and Mair, J.M.M. (1968). The evaluation of personal constructs. London: Academic Press.

[21] Ibid., p. 12.

The ways in which a person anticipates events are defined by his personal construct. Kelly defines a construct as being "a way in which two or more things are alike and thereby different from the third or more things."[22] More generally, a construct is a way in which some things are seen as being alike and yet different from others. People make judgements about things and behind those judgements lie their implicit theory about the realm of events within which they are making judgements. Constructing is the lively way in which we go about trying to anticipate events - real events in the outside world.[23] A construct is thus explicitly a tool to allow not only discrimination and organisation of events but also the anticipation of future possibilities.[24]

An example of the capacity to predict or anticipate events is that if somebody is thought to be a kind person, we could immediately imply a number of predictions about the future behaviour of this person in different situations. The same kind of predictions would occur by labelling somebody as being cruel, etc. What we have to bear in mind is that constructs do not exist in isolation. On the contrary, they are interrelated and interdependent therefore establishing, finally, a pattern

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[22] Fransella, F. and Bannister, D. (1977). op. cit., p. 5.

[23] Ibid.

[24] Bannister, D. and Mair, J.M.M. (1968). op. cit., p. 26.

in which man constructs his reality. The assessment of how children respond to music through listening in audience requires the capacity to detect how children construct their 'musical world' in relation to the music or extract that they are listening to.

Personal construct theory has already been used by different researchers in the field of music education such as Hargreaves,[25] Ward,[26] and Gilbert.[27] The latter used Kelly's Theory "as a means of researching the development of the aesthetic response to the perception of music."[28] Two sets of three musical extracts were presented to subjects age 9-18 years-old where after listening to each extract "they were asked to state *one* reason and then to continue to choose *different* reasons for picking an odd one out until they ran out of ideas."[29] From the subjects' responses bipolar constructs were set up. An example offered by the author was that, if a subject chooses "the first one as the odd one out because it had singing in it, it yielded the bipolar construct 'singing/no singing'."[30] The final analysis of

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[25] Hargreaves, D.J. (1986). op. cit.

[26] Ward, D.J. (1986). Personal Construct Theory: its application to research in music education, in Assessment in Arts Education, Vol.6, ed. M. Ross. Oxford: Pergamon Press.

[27] Gilbert, L. (1990). Aesthetic development in music: an experiment in the use of personal construct theory. British Journal of Music Education, 7, 3, 173-190.

[28] Ibid., p. 173.

[29] Ibid., p. 176.

[30] Ibid., p. 177.

the kind of constructs elicited according to a specific age group was done in relation to the Assessment Performance Unit[31] curriculum grid criteria, where in the case of the present research it will be in relation to the Spiral criteria.

One of the reasons why the present work does not employ the same kind of repertoire grid technique as used by Gilbert (1990) is that this work has an 'independent' section - semi-structured interview - where children will have the opportunity to answer by verbal means about what they have listened to, and thus, results from every instrument are assessed.

Ward[32] uses a similar form of grid, although in his case the elements are two-note chords and single notes of different timbres and pitches, as opposed to musical extracts used in Gilbert's research and will be used in this research. The other differing element between the works of Gilbert, Ward, and the present one, is that while Gilbert elicits the constructs, the two latter used pre-established ones, e.g. consonant/dissonant and timbre, and the three stages of the Spiral sequence, respectively.

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[31] Department of Education and Science (1981). Aesthetic development. A report from the Assessment Performance Unit, Exploratory Group on Aesthetic Development.

[32] Ward, D. (1986). op. cit.

There are many ways in which the repertory grid technique seems to be one of the most appropriate forms of assessing children's musical responses to be used in this research, although not the only one. In general terms, the grid technique is an instrument that offers the possibility of finding out how every person constructs his/her reality. According to Fransella,

> each grid format is essentially an experiment within itself involving us in all problems which we normally expect to find in designing an experiment. Thus decision to administer a grid to one subject or a group of subjects involves us in questions such as what kind of elements do we provide or elicit, what kind of constructs labels do we provide or elicit or do we mix provided and elicited, ... etc.[33]

One of the most important aspects of grid technique that has to be taken into consideration, is that there is a controversy concerning the relationship between personal construct theory and grid technique.[34] Fransella states that "while the technique was developed within the confines of the theory there can be no argument but that it can be used independently of the theory."[35] Since different forms of grids answer different questions, it is of paramount importance to choose the one which would be capable of answering questions proposed by the design. Therefore it is important to look at the grid not as a

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[33] Fransella, F. and Bannister, D. (1977). op. cit., p. 94.

[34] Ibid., p. 104.

[35] Ibid., p. 104.

ready-made device, but as a broad methodology which involves a series of experimental problems. For that reason the present research design makes use of a rather modified form of grid technique which will be described subsequently.

Although repertory grid technique is thought to be especially appropriate in the exploration of relationships between individuals' personal constructs,[36] it can be used in the case of exploring what people can hear in music, as previous research in the area has demonstrated. Although the present research does not apply standard techniques of eliciting constructs, it does conform to the main aims of using such techniques which are to obtain information of how people construct their reality, or as in this case, how children make sense of what they are listening to.

The way it has been set up in the present research design was to offer more information regarding from what stage children were responding to music, e.g. Materials, Expression and/or Form. The most appropriate method of construct elicitation is a variation of the triads of elements - minimum context card form.[37] In this case children are going to listen to three musical extracts and then choose which of the two are similar, and

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[36] Cohen, L. and Manion, L. (1985). op. cit., p. 327.

[37] Fransella, F and Bannister, D. (1977). op. cit., p. 14.

therefore different from the third one.

For that purpose the extracts were carefully chosen according to what appeared to the researcher to be the most striking feature: Three sets of three extracts made up a total of nine extracts.[38] The music for each set was chosen according to the three stages of the Spiral Model. Thus, the first extract has a striking *Materials* feature, which would differ from the second and third extract.[39] The second extract has an *Expression* feature, also distinct from the first and third. The third extract has a striking *Form* feature also different from the first and second. Table 4.1 will summarise the above stated.

Table 4.1: **REPERTORY GRID TECHNIQUE FORMAT**

MUSICAL EXTRACTS SPIRAL STAGES	1	2	3
MATERIALS	+	–	–
EXPRESSION	–	+	–
FORM	–	–	+

According to the grid technique *elements* are events,

[38] The procedure applied for the selection of the extracts will be described in detail in a subsequent section.

[39] See section 4.1.4.4 - Musical Repertory of this chapter.

objects, etc. In this case the elements are the *musical extracts*. The *Constructs* consist of the three stages of the Spiral - *Materials, Expression, and Form*. They are pre-established due to the way the extracts are chosen, meaning that if the child chooses the first extract as the odd one out, it might be assumed that the child's construct system is probably operating in terms of Materials features.

Nonetheless the present work ought to call attention to some limitations offered by this kind of grid applied to audience-listening. The first limitation is with regard to the ephemeral nature of the musical discourse, i.e. music is a temporal art which disappears leaving no concrete evidence for the child to use to then decide which two extracts are similar and therefore different from the third one. Hence, the grid technique applied to music does differ from its applications in psychology, where the elements in this case are musical extracts, as opposed to words and cards in the psychological investigation setting. The second problem - the capacity to memorize - could affect the kinds of choices.[40] The third problem refers to the selection of musical extracts, because every piece of music inevitably contains the three levels. The above problems are offset in this research since the repertory grid technique is

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[40] However in this case, the child will have the opportunity to listen to the three extracts again before being asked to choose the odd one out. For more details see Research Procedure section.

not the only instrument of assessment used in this design.

4.1.1.4 - DRAWING

The rationale for using drawing as one of the instruments employed within the structured interview was to offer children the opportunity to represent, in a free way, the music they have listened to. As opposed to pre-established colour and figure cards, drawings may offer the researcher the opportunity to assess children's representation of their 'holistic' understanding of the music heard. It may be the case that through drawings one could infer something about children's levels of musical structural understanding. For that reason there are no specifications of whether or not they should represent the music by pictorial or abstract means. No colour pens will be used, since it might distract the child's attention from representing what he/she had listened to instead focus on the colour choices.

Every child was presented with three A4 pages where each page is subdivided in three spaces - one space for each extract (Appendix 4). The subdivision of the pages in three parts was purposely designed, bearing in mind that drawings, alongside colour cards and figure cards were used as an aid to help the child review the three extracts once he/she was going to be asked to

choose the 'odd' one out (repertory grid technique).

Research literature in music education has shown that there is growing concern regarding children's representation of music. Among those are the works of Stamback,[41] Goodnow,[42] Bamberger,[43] and others. Hargreaves, in his review of the literature, mentions that,

> experiments have been conducted in which children of different ages have attempted to represent musical stimuli by drawing, and (conversely) to produce musical representations of graphically presented stimuli.[44]

Interesting results were outlined from previous research such as Stamback's and Goodnow[45] where a sequence of taps was used and children were asked to write them down. Goodnow found out that Kindergarten children "were unable to make any spatial representation of the time intervals,"[46] while "between the ages of five to seven, children started to use *size*, *position*, and

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[41] Stambak, M. (1960). Le probleme du rythme dans le developpement de l'enfant et dans les dyslexies d'evolution. Enfance, 4, 480-502.

[42] Goodnow, J. (1971). Auditory-visual matching: modality problem or translation problem?. Child Development, 42, 1187-201.

[43] Bamberger, J. (1980). Cognitive structure in the apprehension and description of simple rhythms. Archives de Psychologie, XLVIII, 186, 171-197.
(1982). Revisiting children's drawings of simple rhythms: a function for reflection-in-action, in U-Shaped Behavioral Growth, eds. S. Strauss and R. Stavy. New York: Academic Press.

[44] Hargreaves, D. (1986). op. cit., p. 95.

[45] Stambak, M. (1951). op. cit.
Goodnow, J. (1971). op. cit.

[46] Goodnow, J. (1971). op. cit.

gaps in order to represent the time intervals."[47]

The type of drawings that children will use to represent music is almost unpredictable since the question asked does not offer clues regarding the kind of drawing required. The question asked in this case was: "How would you represent the music for someone who has never heard this music before, or even to a deaf person?"

4.1.2 - SEMI-STRUCTURED INTERVIEW

The semi-structured interview as opposed to the structured one, is characterised as an almost open situation. Although the researcher may have some preestablished set of questions, he/she also has the freedom to change the sequence or even add some additional questions depending on each interview situation. As opposed to the structured interview, here the researcher has more freedom as far as the type and sequencing of the questions are concerned. Cohen and Manion call attention to the fact that, although this kind of interview is not totally predetermined, it does not mean that it consists of a casual affair.[48]

The advantage of the semi-structured interview in

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[47] Hargreaves, D. (1986). op. cit., p. 95.

[48] Cohen, L. and Manion, L. (1985). op. cit., p. 293.

the present research is the fact that it offers the researcher the possibility of exploring the limits of musical responses, as opposed to a questionnaire where fixed questions can sometimes render misunderstandings and hence distorted answers. Brenner et.al. reinforces that view when he states that,

> any misunderstanding on the part of the interviewer or interviewee can be checked immediately in a way which is just not possible when questionnaires are being completed or tests being performed.[49]

One reason for choosing this kind of interview is that the structured interview, using cards, drawing and repertory grid technique as a way of answering questions, can be very limiting in a sense that the range of answers are normative, i.e. with fixed criteria, and so limited by the design. The other reason relates to the fact that the structured interview as set up here requires basically non-verbal answers. That constitutes one of the main reasons for employing the semi-structured interview in order to explore children's levels of musical understanding through verbal means - a potentially rich source of evidence.

Although the semi-structured interview offers more freedom, the questions always have to conform to what is intended to be measured, in this case - how do children

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[49] Brenner, M. et.al. (eds) (1985). The research interview: uses and approaches. London: Academic Press. p. 3.

of different ages respond to music through listening in audience. One of the problems surrounding the use of the interview technique in general, is the validity and reliability issue. According to Gorden, "the central aim of any data-gathering methodology is to improve both the reliability and validity of the information obtained."[50] One of the proposed ways of examining the interview validity, is through "whether the questions asked look as if they are measuring what they claim to measure."[51]

The question of validity of this method can also be measured on the basis that it uses different instruments to measure, or to obtain information, about the same matter - one's stage of musical understanding. The other way of validating the kind of interview technique used is to compare it with the proven validity among the different tools employed.

As the literature confirms, the semi-structured interview is the one most prone to bias on the part of the researcher. For that reason one has to establish clearly the scope of questions to be asked. An example of biased question in the context of this interview would be: "which instrument is playing?" This would induce the child to respond in terms of Materials stage. To avoid

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[50] Gorden, R.L. (1975). Interviewing: strategies, techniques and tactics. Homewood, Illinois: The Dorsey Press. p. 5.

[51] Cohen, L. and Manion, L. (1985). op. cit., p. 302.

this kind of bias, open-ended questions have been set up, those of which will serve as the main frame during the semi-structured interview procedure.[52] The remaining ones will be asked according to the child's answer. One example would be: the child answers, "this is classical music." The interviewer would then explore further by asking: "what makes you think that the music is classical?" The important issue to bear in mind in any interview is that the questions asked have to be intrinsically connected with the main research question and have to avoid prompting responses at specific stage, e.g. Materials, Expression, or Form.

4.1.3 - SELECTION OF SUBJECTS

The choice of the age groups to be interviewed has a close relationship with the development stage more or less anticipated by the Spiral Theory for children's compositions. The age groups were divided as follows: 5 - 7; 9 - 10; and 12 - 13. Eight and eleven-year-old children were purposefully left out due to the fact that at these ages, according to previous research with children's compositions[53] the child is in a transition

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[52] See Interview Procedure section.

[53] Swanwick, K. and Tillman, J. (1986). The sequence of musical development: a study of children's composition. British Journal of Music Education, 3, 3 305-39.
Swanwick, K. (1991a). Further research on the musical development sequence. Psychology of Music, 19, 1, 22-32.

between Materials and Expression, and Expression and Form stages, respectively.

The research consisted of a cross-sectional survey, which, according to Gorden "is used to describe certain properties of the elements at a single point in time."[54] In the present sample the most important variable to be controlled concerned the age range of the population. The remaining ones are depended on the country in which the research was carried out. The criteria applied to select the population for the present research had to take into consideration a wide range of factors, such as the availability of certain schools to accept a researcher, notwithstanding the fact that the present research will be carried out in two countries - Brazil and England.

Since the Pilot Study was carried out in Brazil, the variable controlled there was, that no one should have had private music lessons as a means of controlling the group which is characterised by children who have never had formal music education. For the main study to be carried out in England, the population should have had music education since the beginning of their schooling. Variables such as gender, race, and social class were not taken into consideration, since it is understood that they are not central to the research question.

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[54] Gorden, R.L. (1975). op. cit., p. 293.

The selection of the population to be interviewed was carried out in a random way to avoid a purposeful selection of more advanced students or more "musical" ones. Despite the fact that population selection made through a random sample predicts that "each time an element is selected, all of the elements in the universe have an equal chance of being chosen,"[55] the population will be selected according to the availability of certain schools. The request for randomization was made within each school according to the age groups requirement so to avoid selecting only one type of student, e.g. the more 'musical'.

4.1.4 - SELECTION OF MUSIC

The musical repertoire to be part of this research was carefully chosen according to specific criteria set up to conform with: a) the experimental requirements, b) idiomatic criteria, and c) the age range of the population.

4.1.4.1 - EXPERIMENTAL CRITERIA

The criteria established were mainly delimitated by the use of the modified form of grid technique. The

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[55] Ibid., p. 296.

decision to use a modified form of grid technique as part of the structured interview, imposed a series of constraints in terms of the selection of the musical repertoire.

Musical extracts should be divided in sets of three to conform to the modified method of construct elicitation, "The Triad of Elements." They should also include a certain number of sets to enable the interviewer to infer on which basis the child is choosing the 'odd' one out.

In general, the above repertoire grid technique is used to 'elicit' constructs, whereas in this case the constructs are implicit by the time the selection of extracts are made. In other words, the selection was to be carried out in such a way that it would be possible to infer that if the child has chosen the first extract as being the "odd" one out, that his/her construct system is operating in terms of Materials features. Thus, if the purpose of using grid technique was to find out children's levels of musical understanding through the way they cluster music by similarity and difference, the extracts had to be chosen according to the Spiral criteria (Materials, Expression, and Form).

Every set containing three items of music had to have: a) one piece with a striking feature in terms of

Materials, which would differ from the second and third, b) one with a striking feature in terms of *Expressive Character*, which should differ from the first and third and finally, c) one with a striking feature in terms of *Form*, also differing from the first and second (Table 4.1). The description of the extracts will be presented at the end of this section. Needless to say, there are difficulties in accomplishing such a task, bearing in mind that every musical 'phrase' contains necessarily all three elements.

4.1.4.2 - IDIOMATIC CRITERIA

The repertoire should encompass more than one idiom. In this case the ones chosen were pop music and classical (classical style to modern), both tonal music which is common in the western world. The range of pop music should not include heavy metal or even folk music, so to avoid strong social and cultural attachment.

The repertoire should also be extracted from familiar idioms to avoid the chance that responses would only be made in terms of the materials involved in the music. The issue of familiarity/unfamiliarity of the repertoire chosen was another variable to be controlled. Since it was decided to use familiar idioms, it became difficult to assure that the repertoire would be

completely unfamiliar to children, since they are normally exposed formally (school), and informally (home and society), to a various musical repertoire. To assure that every child had the opportunity to recall at least in part the music heard, the interview procedure was designed in such as way as to present each extract three times.[56]

The idioms were not mixed throughout the triads to avoid calling the child's attention to superficial idiomatic differences (in a sense of recognising idiomatic differences simply by justifying in terms of "this music sounds different"). The music extracts also had to be subtle enough in terms of stylistic differences (e.g. romantic as opposed to modern), in order to avoid this kind of 'bias'. It is worthwhile to mention that it was expected that the child would be able to respond to idiomatic differences, but these should be made on formal grounds and not only as something that "sounds different". Thus, bearing in mind the above variables to be controlled, the selection of the extracts proceeded as follows.

The extracts should be short enough to be memorable to enable the child to recall the three extracts by the time he/she has to choose the odd one out. They had to be long enough to be 'meaningful', meaning that it should

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[56] See Research Procedure section.

contain at least one musical phrase. The length of the extracts chosen varied from 27 to 32 seconds each (Appendix 5). In this case nine extracts was thought to be the minimum due to the choices the children had to make, and maximum in terms of the amount of music children, especially the young group, could absorb or remain concentrated on and thus respond to the interview.

Since the first extract of each set had to have a Materials feature, it was important to choose different timbres. Thus it was decided to use three distinct ones: piano, strings, and synthesizer.[57] Within the selection, the expressive character of each extract was carefully monitored, since the second one had to differ from the first and third ones. In general it was decided that the second extract of each set should be a music with a more dramatic character than the remaining two. The third extract had to contain a striking 'micro-form' element such as change of character due to the superimposition of different instruments groups, repetition or variation of the theme, etc.

It was decided that the repertoire should contain music that is available to us, as opposed to music composed for the purpose of this research. It should not include vocal music, to avoid the fact that children

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[57] The 6th extract - Haydn - is the only exception where the ostinato is played by woodwind instruments, whereas the melody, which is more outstanding, is played by strings.

would pay attention only to the lyrics and not to the music itself.

4.1.4.3 - CRITERIA FOR SUITABILITY FOR CHILDREN

The number of sets thought to be appropriate due to the age range of the population, were three, making the total number of musical extracts nine. Every decision taken regarding length and number of extracts, number of times each extract is presented, etc., had to take into consideration the time length of the whole interview, which should not exceed 40 to 45 min., due to the age range of the population.

The difficulty of selecting the extracts for this research lay mainly in the fact that the age of the population ranged widely. Since older children ought to have had less problems of concentration than younger ones, the time length of the extracts as well as the interview procedure were based on what was thought was the attention span of a six-year-old child. The rationale for levelling the above criteria according to younger children, was due to the fact that the same design would be employed for every age group.

4.1.4.4 - MUSICAL REPERTORY

A complete list of the musical extracts used in this research can be found in Appendix 5. The extracts will be briefly analyzed, comparing the musical features between them, as to conform with the above criteria.

SET 1:

1) Debussy, C. - "Suite Bergamasque", Passepied (4th movement)
2) Warwick, D. - "Heartbreaker"
3) Collins, P. - "That's Just the Way it is"

The first music is played by a piano, whereas the second and the third are played by synthesizers. The first has no striking Expression or Form feature. The second one has a strong and steady beat in the background. In spite of the fact that the music is not really fast, its motion makes it sound very active and happy as opposed to the first and third selection. The third choice of music has a striking form element. It starts soft only with drums (synthesizer) before other instruments join in, making it sound quite unpredictable, which was not the case of the first and second extracts.

SET 2:

1) Chopin, F. - "Waltz No.1 in E flat Major, op.18"

2) Dvorak - "Serenade for Strings in E, op. 22"
(1st movement, Moderato)
3) Haydn - "Symphonie in D, No. 101 'Clock'"

The first music is played by the piano, whereas the second and third are string music. The first one is a soft and fast music, giving a very light effect, as opposed to the second one which is played very slow, giving a 'sombre' and dragging character. The third music has a very light texture with almost no dynamic changes. The striking feature of this extract consists of an ostinato played by the bassoons, and the melody played by the strings. The initial motif is repeated once, with a conclusive cadence at the end of the extract. Its character is very similar to the first one, and completely different from the second one.

SET 3:

1) Moussorgski - "Pictures at an Exhibition"
2) Elgar - "Introduction and Allegro, op. 47"
3) Bartok, B. - "44 Duos Vol. III", (Duo No. 1)

Again, the first extract is piano music, as opposed to the second and third which are string music. The music proceeds in a chordal way, giving it a quite heavily textured effect. It is quite slow and during these 30 seconds there are no unexpected changes in character,

making it sound quite predictable. The second one has a very dramatic character, unpredictable to some extent, as opposed to the first and the third. The third one of this set has structural differences from the first and second in so far as it presents a motif which is repeated once with a slight variation; a feature that does not appear in the first two.

At this point it is important to stress the arbitrariness in selecting the musical extracts. First, no matter what its degree of complexity, every single work contains the three dimensions of musical criticism. Second, within a world of musical possibilities, numerous sets could be organised, having perhaps the same effect as the above ones.

4.1.5 - INTERVIEW PROCEDURE

The description of the interview procedure will be presented together with the rationale of why it was designed to be in the following sequence.

1 - Each child was interviewed separately, in a room containing: tape player, tape recorder, tables to record their choices of the icon cards as well as the choices of the 'odd' one out, the latter being part of the modified form of grid technique.

2 - Before the interview, the name and age of the child was recorded, and afterwards a brief explanation was given regarding the procedure of the interview.

3 - As the interview started the procedure was as follows:

a - Children listened to the extract for the first time.

b - Children were asked to choose one colour and one figure card that they thought described the music they have heard. The question was posed as follows:

- "Which of the colour cards would you choose to describe the music?"
- "Which of the figure cards would you choose to describe the music?"

Their choices were recorded in the appropriate tables.

c - After choosing the cards children listened to the same extract for the second time.

d - Then they were questioned about what they have listened to (semi-structured interview). The answers were tape recorded and later transferred to the appropriate table. The reason why the answers were tape recorded was to avoid distracting the interviewee, and also to make sure that everything

the child had spoken would be appropriately depicted.

The questions asked were by the nature of the interview (semi-structured interview), open-ended questions to avoid bias from the part of the researcher, in the sense of suggesting what kind of answer was expected. The kind of questions asked were:

- "What can you tell me about the music you have listened to?"
- "If you had to describe this music to a friend who had never heard this music before, what would you say about it?"
- "What kind of things did you notice in the music?"

It is worth mentioning that the above questions were not necessarily asked in this sequence, and that sometimes other questions were asked based on the child's comments. For example, if the child made a comment such as, "this music is a classical music", it would be appropriate in this case to further investigate what he/she meant by "classical" by asking the question: "what makes you think that this music is a classical music?" This kind of 'freedom' is perfectly in accordance to what is defined as a semi-structured interview.

e - After having given their 'verbal' account,

children had a chance to change the cards around, and at that time they were asked to represent in a blank A4 paper the music they had listened to (drawing section). The question was posed as following: "how would you represent this music for someone who had never heard this music before?"

f -Finally, after children listened to the third extract (of each set), and having in front of them three colour cards, three figure cards, as well as three drawings each corresponding to the musical extracts of the set, they listened again to the three extracts in a sequence, and afterwards children were asked to choose which one of the three music extracts is the 'odd' one out. To younger children who may not understand what the word 'odd' means, the researcher substituted the word from 'odd' to 'different'.

The above procedure was standard for each extract, except the item 'f' which came after every third extract. It was also a standard procedure for every age group.

CHAPTER 5: PILOT STUDY CARRIED OUT IN BRAZIL AND EVALUATION OF RESEARCH PROCEDURES

5.1 - GENERAL CONDITIONS

The pilot study consisted of playing music and interviewing forty-five Brazilian children divided into three age groups (5-7, 9-10, 12-13), with fifteen children in each group. The Pilot Study was carried out in Brazil for the following reasons: first, due to the fact that Brazil is the researcher's country of origin, and researching children's level of musical understanding in that country is of particular interest. Second, since music education is not a part of the official school curriculum, Brazilian children would supply a data difficult to find in this country. No child interviewed in Brazil had formal contact with music education (perhaps only random singing). Children have the so called "Arts Education" (one hour, once a week), which according to the government national guidelines, should have a balanced experience in three arts - Visual Arts, Music and Drama. However, in practice they get basically only Visual Arts tuition.

The interview took place in a primary and secondary state school in Nova Petropolis, R.S., Brazil. Since the

researcher has previous contact with these primary and secondary schools, access to data would not be a problem. The school has children ranging from low to middle class. The selection of children was made randomly, out of those who had never had private music lessons and within their age group. The interviews were conducted individually with the time average of 45 min. for each child. The room in which the interviews were conducted was in a satisfactory physical condition (tables, chairs, good illumination and ventilation). There was no interruption of any kind, and background noise, which was minimal, was considered to be similar for every subject interviewed.

5.2 - CHILDREN'S ATTITUDE TOWARDS THE INTERVIEW

As a general assessment of children's attitude, it can be said that every age group acted in a very co-operative way responding to every stage of the interview. Since the group of children interviewed had never had any formal contact with music education, the most notable reaction was of expectation and shyness. However, after having explained that the interview had no grading purpose, children felt more relaxed.

For the youngest group (5-7) it seemed that the variety of activities (choosing cards, drawings, etc.), was one of the aspects that motivated them and, at the

same time kept their attention for the time length of the interview. The second age group (9-10) had fewer problems with the semi-structured interview and the 'odd' one out (repertory grid technique) than the first group, although some of them expressed difficulties in recalling the three extracts before choosing the 'odd' one. Icon cards and drawings were also important tools to assess children's musical understanding through listening in audience as well as concrete elements to help children distinguish one music from the other (repertory grid). The time length of the individual interview was around 40 to 50 min.

The third age group (12-13) was the easiest group to interact with from the researcher's point of view. They showed less doubt about what was required, except in the semi-structured interview and drawings sections where they thought technical knowledge was necessary. However, after the first and second extracts they seemed to be at ease with the interview procedure. This group took a longer average time to finish the interview because they tried to carefully elaborate their verbal answers (semi-structured interview), as well as tried to draw exactly what they had in mind. The interview time ranged from 45 to 55 min.

5.3 - RESULTS BY INSTRUMENTS ACROSS AGE

5.3.1 - COLOUR CARDS

According to the research design, colour cards (Appendix 2), were used to attempt to evaluate children's perception of sound Materials, e.g. timbre, loudness etc. For analysis purposes, they were divided into two groups named: *mild* and *strong* colours (Table 5.1). The purpose of those cards was to try to find out any predominance of choices in relation to levels of loudness, tone colour, etc, of the music.

Table 5.1: **COLOUR CARDS CHOICES**

	5 - 7		9 - 10		12 - 13		TOTAL	
	MILD	STRO	MILD	STRO	MILD	STRO	MILD	STRO
1	9	6	9	6	5	10	23	22
2	11	4	6	9	8	7	25	20
3	5	10	12	3	9	6	26	19
4	8	7	6	9	8	7	22	23
5	9	6	7	8	11	4	27	18
6	7	8	9	6	10	5	26	19
7	9	6	8	7	9	6	26	19
8	5	10	10	5	5	10	20	25
9	9	6	5	10	9	6	23	22

According to Chi Square results, the total choices of colour cards do not show a significant level of preference for any age group. The aim was to find out if there would be an observable trend in terms of choices of colour cards. The two last columns of Table 5.1 constitute a total of choices made by every age group for each musical extract.

The choices made by the first group (5-7) appeared

to be made at random, most of the time trying to match the figure cards. Some of them voluntarily commented about their choices. Thus, comments such as, "I like it", or because "this one I have not chosen yet", permeated most of the first group's answers. As an additional comment it could be said that the second and third age groups seemed to match the colours with the texture and mood of the music. Their comments about their choice of colour cards seemed to be related to their perception of musical texture. If the music was light (waltz played by piano) the colours chosen tended to be light, whereas if the music had a heavy texture, the colours tended to be strong orange and bright yellow. There may well be an association between colours and emotional state.

5.3.2 - FIGURE CARDS

Figure cards (Appendix 3), were used to attempt to evaluate children's capacity to identify expressive character in music. Figure cards, like colour cards, were also grouped into two, named: *active* and *passive* (Table 5.2). This classification enables the identification of a possible trend of choices among the age groups. The results were not anticipated in the sense of pre-establishing that music "X" is passive or active. Table 5.2 shows the number of choices made by every age group for every musical extract. The final two columns present

the total of choices of active and passive by every extract.

Table 5.2: **FIGURE CARDS CHOICES**

EXTR	5 - 7		9 - 10		12 - 13		TOTAL	
	ACT.	PAS.	ACT.	PAS.	ACT.	PAS.	ACT	PAS
1	5	10	3	12	6	9	14	31
2	5	10	4	11	2	13	11	34
3	10	5	11	4	11	4	32	13
4	7	8	5	10	3	12	15	30
5	10	5	9	6	12	3	31	14
6	4	11	9	6	7	8	20	25
7	10	5	9	6	6	9	25	20
8	5	10	6	9	9	6	20	25
9	7	8	7	8	2	13	16	29

Table 5.3: **FIGURE CARDS CHOICES: STATISTICAL RESULTS**

FIGURE CARDS STATISTICAL RESULTS: ACROSS AGES		
MUSICAL EXTRACTS - SET 1	Chi.Sq. 23.50	p<.01
MUSICAL EXTRACTS - SET 2	Chi.Sq. 11.91	p<.01
MUSICAL EXTRACTS - SET 3	Chi.Sq. 3.60	p<.NS

Figure cards showed a significant result in every age group, except with set three. According to statistical analysis (Table 5.3), the level of significance of the total of figure card choices for the two first music sets is $p<.01$. The third set is non-significant, and there are two suspected reasons for this. Firstly, is the fact that the musical extracts of the third set may not be so clearly passive or active but somewhere in between. Secondly, there was a possibility at that stage of the interview, of children becoming tired (bearing in mind that this is the last set).

It was noticed during the interview that children's perceptions of figure cards have changed between younger and older children. While the first group seemed to have paid more attention to the movement of the "stick man" (people in action), older ones tried to decode the figure's mood by looking to details such as, "here he is

neither laughing nor crying, he is simply sad". Older children also showed more consistency in their choices than the younger ones. The results of the figure cards' choices showed, in every age group, a meaningful percentage of Expression responses (Table 5.2). The choice of figure cards shows more consistency in this group of children 12-13. The exceptional feature of the age group 12-13 was that they seemed to need parameters of comparisons, i.e. listening to the three extracts and then choosing all the cards.

5.3.3 - REPERTORY GRID TECHNIQUE:

The use of the modified form of repertory grid technique, was to find out the musical understanding stage in which children operate by presenting them three different musical extracts, out of which they had to choose the 'odd' one out. The results were summed up according to the age groups and Spiral stages (Table 5.4). From Table 5.4 and Figure 5.1, it is possible to see that all age groups had a predominance of choices classified under the Materials stages, with a decrease in answers on Expression stages basis. Choices made in terms of Form (third extract as the 'odd' one out), show a steady increase from younger to older age groups.

Table 5.4: **REPERTORY GRID TECHNIQUE - CHOICES ACCORDING TO THE SPIRAL CRITERIA**

AGE GROUP SPIRAL STAGES	5-7	9-10	12-13
MATERIALS	22	24	17
EXPRESSION	15	11	12
FORM	8	10	16

Figure 5.1: **REPERTORY GRID TECHNIQUE: BRAZILIAN DATA**

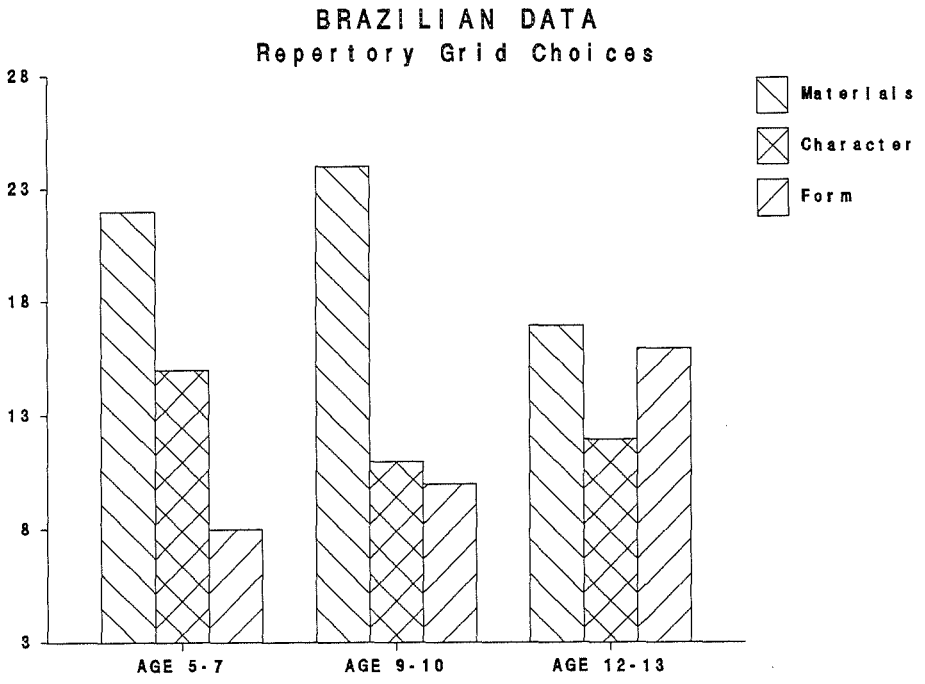


Table 5.5: **REPERTORY GRID TECHNIQUE STATISTICAL RESULTS**

REPERTORY GRID STATISTICAL RESULTS		
CHILDREN AGES 5-7	Chi.Sq. 6.53	p<.03
CHILDREN AGES 9-10	Chi.Sq. 8.13	p<.01
CHILDREN AGES 12-13	Chi.sq. 0.93	p<.NS

A Chi Square test was applied to verify the level of significance of each age group's choices. The first and second age groups showed a statistically significant result in their choices, p<.03 and, p<.01 respectively, while the older group's results were non-significant, and could have happened at random.

By the time children were choosing the 'odd' one out extract, some children voluntarily made some comments about the reason for choosing a specific extract. These comments appear in the text as additional data. It was noticed, for example, that older children's rationale (comments), were less matched with their choices. As an overall observation, the major concentration of answers were in terms of Expression and Materials stages respectively. No comments were made in terms of Form, which in a sense contradicts the results of their

choices, especially of the older group.

The choices of the 'odd' music of each set were made on various grounds. For many children the 'odd' one was the most unfamiliar music, i.e. the music that had no resemblance with what they were familiar with. Others were made according to the kind of figure cards they had chosen, "this one is different because the stick man has a different face" (this happened mainly with the first age group of children (5-7), which confirms the fact that they needed concrete elements to work on. Some have chosen the one that they did not like. Others made the choice based on the number of instruments that were playing.

Apparently there is no way in which children could be placed in a specific stage if only the repertory grid were taken into consideration. Nevertheless the repertory grid results of every age group showed that further thoughts have to be given in terms of musical extract choices.

5.3.4 - DRAWING

The drawing section aimed to find out how children would graphically represent their musical responses, and how far this representation would relate to children's

choices of cards, choices of the 'odd' one (repertory grid), and semi-structured interview. The data that is going to be described should be considered as a form of additional comment since no technical analysis has been made.

The kind of drawings made by children of different ages probably tried to describe their focus of attention in music (Appendix 6). Drawings of all age groups were figurative, describing people, objects, musical instruments, and even small stories with different scenes as in the case of older children (12-13). What can be seen on the drawings of these children, across ages, is that they change considerably to a more sophisticated and time line representation (drawings involving different scenes). Younger children tended to draw static figures to represent their musical response, such as simple drawings of human figures, houses, and objects in general. At the age level 5-7, a great number of children simply copied the figure cards they had chosen, which may be interpreted as a research bias.

Older ones (12-13) tried to create stories in the same way they described verbally through the semi-structured interview. The second and third groups (9-10, and 12-13), took longer than the first one (5-7), to complete their drawings. They were more concerned with details and representing exactly what they meant. The

greater part of the age group 9-10 drawings demonstrated that attention was turned to the kind and use of instruments. However, most of the time the instruments they had drawn did not match with the real instruments played, except in the case of the piano (an instrument which they are acquainted with). Others such as orchestral instruments were represented by guitars, flutes, etc., at random according to children's range of familiarity. In the Expression stage there is an increase (in relation to the first group), in the representation of mood. Some drawings tried to represent people becoming happy or sad after listening to the music.

A criticism about the kind of drawings made by children is that they might have been influenced by the figure cards presented to them before they were asked to draw, suggesting how the drawings should look. It may be the case that, if they have not had figure cards as a suggestion they would draw abstract elements which would probably offer clues to how children respond to Form elements. However, since their drawings were very much related to their semi-structured interview responses, it is impossible to see how they would be different, considering that all age groups responded basically in referentialist terms, creating images and stories to represent the music heard.

5.3.5 - SEMI-STRUCTURED INTERVIEW

The semi-structured interview was the main data gathering source of this research. As opposed to the structured interview, the semi-structured offers a greater freedom of interaction with the interviewee, as far as the sequence and kind of questions are concerned. Throughout the semi-structured interview, it was possible to observe a certain sequential pattern of responses.

By approaching the question: "what can you tell me about the music you have listened to?" - it may be possible to infer that there was an immediate attempt to find out what kind of instruments were playing, or as children would say, "I try to listen to the voice (meaning sound) of the instrument." But immediately after, an association with situations, related or not to the music, followed.

As was expected, the younger group (5-7) was the one who demonstrated the greatest difficulties in expressing themselves verbally, therefore some questions remained without answers. This was also the group who required more flexibility regarding the way questions were approached. The description of what children could hear may or may not be related to the music at this age (5-7), because some responses given, related with what they knew or were thinking at the moment of the

interview, rather than a 'true' response to music. Sometimes it seemed that the stories they told would have arisen with or without the music they were listening to.

There were also some responses such as: "Beautiful sound"; "I listened to the music"; "Very different sound", that did not appear to be entirely anticipated by the Spiral phases criteria. These kind of responses were interpreted as simply denoting a kind of *awareness to music*, meaning that they attended to the overall Materials of the music. Since the Spiral was used as the ultimate criteria, it is thought that this kind of response should be classified under the Materials stage.

The order of comments of the age group 9-10 differed from the first group. The first comment was normally a 'preference' or 'taste' statement such as, "I like this music", "this music is beautiful", etc. Again responses were based on the overall impression of sounds. The second comment was if they had listened to that music or 'idiom' somewhere else on the radio or television. Responses such as, "Like wedding music"; "Rock music"; "This music is ideal for someone who likes opera", etc., clearly demonstrate an attempt to *label the music*. It may be the case that, since children had no formal musical background, and thus no verbal articulation (musically speaking), that there is, first, a tendency to label music, or place it into specific 'boxes', on the basis of

previous experiences. This kind of response should not be understood as belonging to the idiomatic phase (Form stage), due to the lack of rationale offered of why a specific music is 'classical' or 'rock'. The third more likely comment referred to the kind of image or story the music elicited, e.g. "like a ballerina dancing for the first time." The fourth comment related to the kind of instruments playing, loudness level, tempo, pitch. The third and fourth comment alternated sometimes.

In general, it can be said that statements of this age group (9-10) seem to be more sophisticated than the first group, although they continue to operate mainly in referentialist terms. A slight time line begins to appear, where comments are not only made in terms of steady images, but through small 'scenes'. It was also felt that responses of this group were more related to children's emotional states at the moment of listening to the music, e.g. sad, happy, thoughtful, etc. This group, unlike the first one, had less problems in expressing themselves verbally.

The most common order of comments of the age group 12-13, was first, trying to identify the kind of music, e.g. rock, classical, church, etc. (music labelling). Second, was in terms of mood, i.e. if the music is calm, agitated, or happy. Third, was if they knew the music that was playing, and then the kind of instruments.

Fourth, if the music was beautiful or not and what kind of thoughts came to their mind while listening to music. Most of them demonstrated some reluctance in talking about the instruments that were playing, maybe due to their awareness that they had no technical knowledge to talk about it.

Through the inspection of the semi-structured interview data it is possible to see that children's responses did not exceed the Expression stage, more specifically - Personal Expressiveness phase. Due to the lack of musical education their responses are far from elaborate, demonstrating no single attempt to analyze the music, according to its musical features, but rather an incessant attempt to relate the music to a specific situation or story. One typical example of this is the attempt to refer to the music some scene or story they have in mind.

The procedure employed to analyze the semi-structured interview data (Appendix 7), was as follows: First, students were grouped by year (age groups). Second, every student's responses were analyzed, and third, each extract response was classified by the highest Spiral stage of response reached in each extract. Each extract response was taken as one comment where the researcher carefully tried to map according to the predicted Spiral criteria for listening in audience

(Appendix 9). To accomplish this task a special matrix has been devised in order to classify each extract response (Appendix 10).

The rationale of analyzing children's whole response for each extract conveys the principle of this research, i.e. how children construe their musical experience through listening in audience, and if there is a level of agreement which consequently could be mapped according to the Spiral sequence of musical development.

After having classified every response of every age group, according to the highest stage reached within the Spiral (Appendix 8), a further reduction of the data proceeded. This time by counting every student's highest responses, from every age group, and placing them in an appropriate table (Appendix 11). Following that, all responses given by each age group according to the Spiral stages were summed. The purpose of this numerical reference was to apply a simple statistical test to see to what extent there is a difference of stages reached among the age groups. Table 5.6 shows the final results of the number of highest Spiral stages of responses given by each age group.

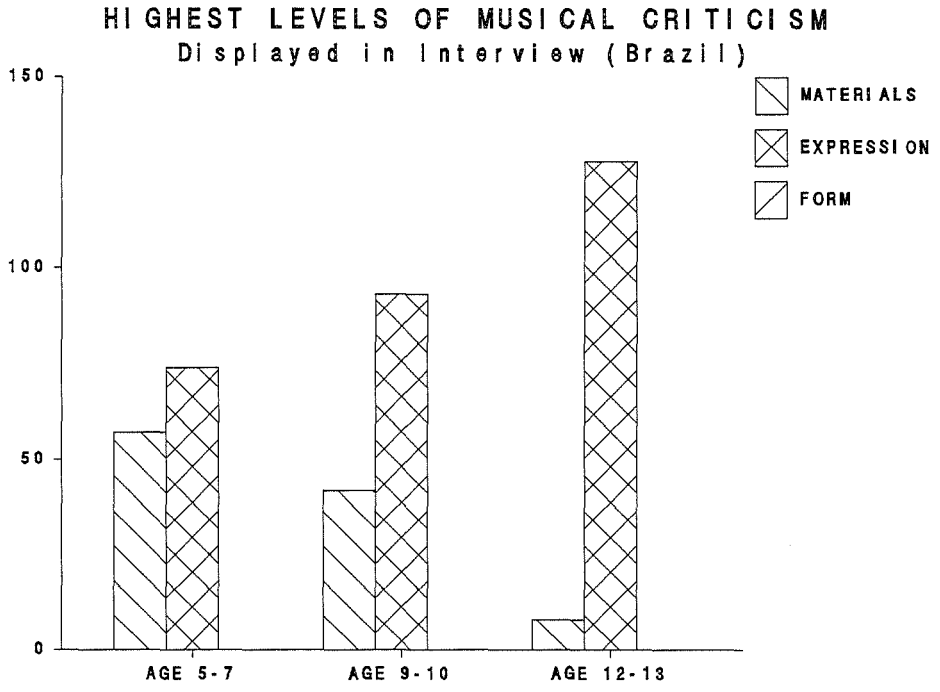
Table 5.6: **HIGHEST LEVEL OF MUSICAL CRITICISM DISPLAYED IN SEMI-STRUCTURED INTERVIEW: BRAZILIAN DATA**

	MATERIALS	EXPRESSION	FORM
5-7	57	74	0
9-10	42	93	0
12-13	8	128	0

Chi Square = 50.47 (For Materials and Expression only)

Probability = $p < 0.0001$

Figure 5.2: **HIGHEST LEVEL OF MUSICAL CRITICISM DISPLAYED IN SEMI-STRUCTURED INTERVIEW: BRAZILIAN DATA.**



By analyzing children's semi-structured interview responses (Table 5.6 and Figure 5.2), it is possible therefore to see that children ages 5-7 and 9-10 had not only a higher rate of responses in terms of Expression, but also many responses classified under the Materials stage. There were no responses in terms of Form. These differences are statistically significant in relation to children's ages.

Children of every age group answered in terms of referentialist statements, except in Materials comments about musical instruments, level of loudness etc. On the other hand, Expression comments are totally described in terms of small stories, 'picture statements', personal associations,[1] etc.

Through the inspection of the data, it is possible to see that most of the responses from children ages 5-7, were classified under the Expression stage, although figures demonstrate that this group still presents a considerable number of responses classified under Materials stage. The second age group (9-10), had even a higher number of responses classified under the Expression stage, and response from children 12-13 showed an almost total predominance of responses classified under the Expression stage. None of the age groups reached the Form stage.

5.4 - INTERPRETATION

In spite of the fact that the results of the five instruments of measurement[2] do not match exactly (number of answers corresponding to the Spiral stages) among

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[1] Meaning responses such as, 'I can see my cat playing on the ground' etc.

[2] Colour cards, figure cards, repertory grid technique, drawings, and semi-structured interview.

themselves, they offer some indications about children's stage of musical understanding. If the results of the four instruments[3] are to be combined it is possible to reach the following conclusions: Children of 5-7 showed a predominance of higher level responses in terms of Expression stage (semi-structured interview), with substantial responses in terms of Materials through the semi-structured interview. This result is supported by the choices of figure cards where there seems to be a reasonable level of agreement of the choices of active and passive (Tables 5.2 and 5.3). The repertory grid shows a predominance of choices classified under Materials with a substantial number of choices made in terms of its Expression features (Table 5.4 and Figure 5.1), also confirmed by the kind of drawings made.

Overall, the impression is that children's responses did reach the Expression stage but are still very much concentrated on the Materials features. The results of this age group have been shown to be significant since their responses show a close relationship among the four instruments of measurement. The apparent high level of responses made in terms of Expression with a high rate of agreement of figure card choice, and semi-structured interview, can in some way be supported by the Spiral criteria when it predicts that: "4 to 6 years seems to be

[3] Colour cards have been left out for reasons mentioned earlier.

the optimum time for personal expressiveness."[4] Since the ages of the selected group ranged from 5-7, it was likely that results such as this would come up.

Children 9-10 responses did not present the same level of agreement between the different instruments. Responses given through semi-structured interview (Table 5.6 and Figure 5.2), show that the gap between Materials and Expression stage is greater than the former age group in favour of Expression responses. The choices of figure cards (Tables 5.2 and 5.3), come to confirm the semi-structured interview results, as far as the four first extracts are concerned. The choices of active and passive for the remaining extracts did not show the same level of agreement possibly for the reasons mentioned before (that the musical extracts were not clearly passive or active).

Repertory grid results present contradictory responses, in so far as the predominance of choices appear to be made on Materials stage grounds with the remaining choices divided between second and third extract - denoting Expression and Form respectively. Children's drawings also present a mixture of representation in the sense that some of them appear to represent children's concentration on Materials (drawings of instruments and performers), while others tended to

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[4] Swanwick, K. (1988). Music, mind, and education. London: Routledge. p. 78.

associate specific music with stories or some pictorial scenes.

Children 12-13 combined results are more precise than the second age group, with the exception of repertory grid results (Table 5.4). The high percentage of responses given in terms of Form shown in repertory grid do not match with the results of the remaining instruments. Almost every response made through semi-structured interview (Table 5.6 and Figure 5.2), reached the Expression stage. These results are confirmed by the level of agreement presented by the choices of figure cards (Table 5.2). Drawings also seem to support these results by demonstrating that there is a tendency to represent the music in terms of stories, where even a time line (representing the changes of mood), seems to appear.

The inconclusive results, from children aged 12-13 shown through the repertory grid results may be attributed to two factors: First that the level of indecision is due to their age (12-13), where children seem to have a wider range of options and rationales for choosing one 'odd' element out of three. Second, that results can be attributed to children's lack of formal music education. Thus children who were not musically educated, can reach different levels throughout the years which may or may not be similar among themselves. In this case the

repertory grid results do not offer us a meaningful clue regarding the stage of children's musical understanding.

Since those children in Brazil did not have any formal contact with music, it was expected that they would operate in the lower stage of the Spiral. It is important to acknowledge that we are dealing with different cultural settings, and equally important to verify up to what extent formal education is capable of framing individuals understanding of the subjects in question, i.e. how children construct their listening in audience experience.

The above results are also empirically supported by research done with Cyprus children.[5] This research consisted of replication of the work done by Swanwick and Tillman[6] with children's compositions. As was described in this article, Cyprus schools' music curriculum "is in progress of positive development with specific encouragement being given to teachers to include composing in the classroom."[7] In other words, the Cyprus music curriculum is still not as developed as in English schools' curriculum and composing is a relatively new element. These may be shown in the results, where there

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[5] Swanwick, K. (1991a). Further research on the musical development sequence. Psychology of Music, 19, 1, 22-32.

[6] Swanwick, K. and Tillman, J. (1986). The sequence of musical development: a study of children's composition. British Journal of Music Education, 3, 3, 305-39.

[7] Swanwick, K. (1991a). op. cit., p. 27.

is a greater variance in older children's data. There is a significance percentage of older children that appear to be operating in lower stages of the Spiral.[8]

From Cyprus and Brazilian data, (despite one being related to composing and the other to listening in audience), it may be possible to suggest that the amount of experience in formal music education is absolutely relevant for someone to reach the higher stages of the Spiral sequence. Since the present work deals specifically with listening in audience, further research with children who have a structured music education has to be pursued, which may or not be related with the parallel drawn between English and Cyprus children's composition.

Since the present work involves a subsequent field work with English children, it was decided to leave the section concerning the analysis and implications for further research at the end of the thesis (chapter 7). Thus, before that it is of paramount importance to evaluate the research procedures applied to the Pilot Study to see whether or not the method should undergo changes.

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[8] Ibid.

5.5 - EVALUATION OF RESEARCH PROCEDURES

The pilot study developed in Brazil was extremely relevant in terms of trying out a new method of assessment in the field of listening in audience. Despite having used a population sample which has no formal music education background, the present method seemed not only suitable for evaluating specific instruments of measurements never used before, but also for assessment of children's levels of musical understanding. The use of such wide-ranging instrumentation, though complex, has proved in many ways, to be effective as well as necessary in this particular field (assessing audience-listening). A great amount was learned from this Pilot Study in terms of the effectiveness of different instruments.

Each instrument of measurement brought out different aspects (domains) of effectiveness to extract information of children's musical understanding. As an overall evaluation, this Pilot Study demonstrated the value of employing more than one instrument of measurement ranging from verbal to non-verbal ones, although not all were shown to be effective and, consequently were not used in further research. To proceed, each instrument, will be taken briefly into consideration, regarding its effectiveness and suitability to be used in further research. There will be also a discussion about the choice of musical repertory, selection of age groups,

testing procedures, and a suggestion regarding the extension of the Spiral phases criteria.

5.5.1 - COLOUR CARDS

Colour cards were chosen not in the way it was expected according to the research design (as sound materials' differentiation), but possibly for other reasons such as mood, texture, etc. Since there was a mixture of reasons of why colour cards may have been chosen, the statistical results do not show a consistent and significant preference of choices. Therefore colour cards, in the way they have been employed in the present research, do not appear to be meaningful or appropriate as an instrument of assessment for listening in audience. Therefore they would not be part of the next field work to be carried out with English children.

5.5.2 - FIGURE CARDS

Figure cards, have been demonstrated to be an important instrument to assess children's understanding of expressive qualities of the music. One possible negative aspect of using figure cards to denote a specific degree of activeness, is that they function as determinate and pre-established symbols, not allowing

children to express their own non-verbal response to music as they would do through gestures, for example.

On the other hand, the use of figure cards worked as a major source of reliance by the time children had to choose the 'odd' one out (repertory grid). It clearly demonstrates that children, especially the younger group in particular, are helped by having something concrete in front them to contrast, compare, and recall the musical items. However, as figure cards results show, there seems to have been a problem with some extracts in the sense of not being clearly active or passive. This suggested a revision of the repertory, to ensure that the musical extracts chosen would present a more distinctive degree of activeness and passiveness.

5.5.3 - REPERTORY GRID TECHNIQUE

The modified form of repertory grid technique did not work in every expected way. Children's comments about their choice of a specific extract as the 'odd' one out varied among the age groups. This became evident by the kind of answers children gave by the time they voluntarily commented on their choices.

The first set of extracts seems to be the most appropriate because children's choices corresponded to

the way the musical extracts were laid down, i.e. "the first one is different because it is played by a different instrument", or, "...because it sounds like classical music and the other two like rock music", etc. However in the two other sets there were some contradictory answers, e.g. choosing the first extract and giving an explanation on Expression grounds.

This research instrument requires from children some internal representation of the three musical extracts to enable them to make the choice of the 'odd' one. This was one of the problems faced by the different age groups. The younger the children, the less their capacity to recall the music. That is why a great part of the younger group's choices were made as a reference to the figure cards, drawings and even what they had responded in the semi-structured interview. This is not to say that older children did not use those means. On the contrary, those were the main sources for judgement of the three age groups.

Thus, since a clear pattern came out of the first and second age group despite some contradictory rationales about third choices, it would be important to use the same modified form of repertory grid technique in the next field work, but at this time add the request of at least one word rationale for every choice made.

5.5.4 - DRAWING

According to a visual arts specialist - Sheila Paine[9] - the way drawing was used in this research, alongside figure cards, might have presented a bias for children's drawings. Besides its alleged problems of being influenced by figure cards, there was an additional problem. This regards to its interpretation as denoting a specific musical understanding. The use of this instrument would involve a deep understanding from the researcher's part of a different domain of representation. For these reasons, drawing was removed from the next field work.

5.5.5 - SEMI-STRUCTURED INTERVIEW

The semi-structured interview is one of the most important instruments to gather information about children's level of musical understanding, despite younger children's limitations in terms of vocabulary and verbal fluency. It has been proven to be very effective especially with older children, bearing in mind that they have a greater linguistic fluency. It remained in the design of next field work.

The age group 12-13, more than the others, showed

[9] In a private meeting I had with her.

that there might be a gap between what was intended to be measured (children's musical understanding) and what has been really achieved (children's first response to music). After having asked children many questions, some of the older age group told the researcher that if they had had more time to listen, they would perhaps be able to talk more about the music. They felt unable to concentrate on more than one or two musical features at one time.

5.5.6 - SELECTION OF MUSIC

According to the repertory grid technique results, some sets have shown to be a problem for children to spot the major characteristic of the music as it was intended, i.e. as presenting a distinctive feature of Materials, Expression, and Form. The only probable exception happened with the first set (Appendix 5). In this case children's choices for the first extract as being piano music was clearly discerned. The same did not seem to have happened with the second and third sets, where children had chosen specific extracts with different rationales. Regarding figure cards the extracts 6, 7, and 8, presented a doubt for the children in terms of choice between active and passive music.

It seems that listening only three times presented a

slight problem because of the tendency that children had to verbalise, choose, or represent elements that they have heard in the first moment. This phenomena happened in this Pilot Study to a point that some children (older ones), mentioned that if they had listened to the music more than three times they would be able to say more about the music. On the other hand there are some doubts of whether or not the change of repertory or even the number of times they listen would change qualitatively their level of responses.

5.5.7 - SELECTION OF SUBJECTS

The other point that has to be considered regards the division of age groups (5-7, 9-10, 12-13). The first age group presents a wider gap (two years) than the remaining groups, issue that should be taken into account in the next field work mainly because, at this age, two years of difference can have a substantial effect in the way children respond to music (e.g. at the age of five a child has just started Year 1, while at the age of seven the child is already heading towards the end of Year 2).

5.5.8 - INTERVIEW PROCEDURE

It seems that the interview procedure was

productive, although some unexpected issues emerged. Those issues will aid in the setting up of the revised method as well as in interview procedures. The positive aspect regards the way in which extracts were presented to the child. Listening to each extract twice, (and then a third time, in sequence, by the time they had to choose the 'odd' one out), and analyzing everyone at the time helped children to concentrate on one musical extract at a time.

5.5.9 - EXTENSION OF THE SPIRAL STAGES CRITERIA

The criteria used to analyze the semi-structured interview was based on Swanwick's Spiral criteria for listening (Appendix 9). Following the Pilot Study, it was possible to notice that some responses given through the semi-structured interview did not fully match with the Spiral phases criteria.[10] Therefore it seems of paramount importance to state on what grounds the Brazilian data was analysed based on the slightly extended criteria and thus offering a clear framework on which the next field work responses can be based.

The first category of responses regards the tendency, especially among younger children (5-7), to respond in terms of preference, or if the music was

[10] These have been mentioned in the semi-structured interview section.

beautiful or not, e.g. "I do not like classical music", "This music is beautiful, "I like it", etc. Although the content of responses reveals a degree of preference, they could not be mapped according to the Value stage prediction. Some reasons for this may be because according to Swanwick, the Value stage would represent "the apogee of musical development and therefore indicating self-awareness of the processes of thought and feeling in a value-response to music."[11] This would only come after one has been systematically engaged with music for a considerable number of years, especially in the case of children. Most responses in terms of preference, were given by age group 5-7, followed by the second age group (9-10).

These statements highlight the view that Swanwick's criteria do not predict every single response. On the other hand they do offer a very clear general description of the kind of musical behaviour that is expected in each stage and phase of listening in audience. The task that is presented in this work is to contextualise such responses in the light of children's general musical responses.

Since the present approach to analysis does not deal with single 'statements' analysis, but rather with a whole response given for each extract, these statements

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[11] Swanwick, K. (1988). op. cit., p. 74.

are analyzed under the whole response perspective, and numerically classified according to the higher stage reached in each extract response. What has been noticed is that these statements appear within Materials responses and sometimes within Expression ones. More than anything else, these statements seem to reveal a simple 'awareness to music', i.e. showing that the child was there listening to the music. This could be noticed during the interviews by the degree of non-commitment of the responses and by the fact that they were not followed by a formal rationale, thus considered for the purpose of this work, as Materials stage responses, rather than Value stage ones. It was agreed between the researcher and author (Prof. Keith Swanwick) that these responses should be understood as 'awareness to music'. This has been defined as the capacity of making judgements based on the overall impression of the sound, and therefore being part of the Materials stage.

A second category of comments, this time comprehending responses such as: "It sounds like ballet music", "it sounds like rock music", "it sounds like classical music", should not be understood as Idiomatic - Form statements, due to the lack of a rationale of why a specific music is a classical or rock music. These statements were again agreed between the researcher and the author as being simple responses made in terms of Personal Expressiveness, part of the Expression stage,

because they were made in terms of the overall impression of the expressive character of the music.

There is also an added feature that should be taken into account, which is with regard to the degree in which a specific response to a musical extract is articulated in a *cumulative* way, i.e. responses encompassing all lower stages up to the higher stage reached by every response. This feature has not been considered in the Pilot Study. However, it would be important to analyze responses based on the degree of cumulativeness, in order to verify whether Swanwick's claim that the musical development process "is cumulative"[12] could be confirmed.

Thus, the final extended criteria, for every Spiral stage, can be summarized as following:

MATERIALS:

A response to be classified under the Materials stage should contain the following characteristics: 1) It should contain responses based on the perception of instruments, timbre, etc. (Appendix 9). 2) It should contain no articulation of musical elements, i.e. 'straight' statements.

EXPRESSION (NON-CUMULATIVE):

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[12] Ibid., p. 67.

The responses should be given in terms of Materials and/or Expression but showing no degree of interrelation between the two stages, e.g. "sounds happy", "it is fast". In this way the child is demonstrating his/her awareness of both Materials and Expression features, but the response does not give evidence that one may be a consequence of the other.

EXPRESSION (CUMULATIVE):

In this case, the responses should contain Materials as well as Expression stage comments; however, they should demonstrate an understanding of the expressive character of the music as a consequence of the use of specific Materials. For example: "This music sounds happy *because* the violins are playing high notes." In this case there is not only the evidence of a presence of the two stages, but also a rationale of the expressive character of the music in terms of its Materials.

FORM (CUMULATIVE):

An extract response to be classified under the Form stage should contain a greater articulation of the Materials and Expression stages in a time line, i.e. being able to describe the change of character of the music based on changes of key, change in dynamics, as the music proceeds (See Appendix 8).

The next chapter will concentrate on the revision of the method for use in the next phase of field work and report the results of this research which was carried out in schools in England.

CHAPTER 6: REVISED METHOD AND ANALYSIS OF THE RESEARCH CARRIED OUT IN ENGLAND

6.1 - REVISED RESEARCH METHOD

Based on the evaluation of research procedures carried out in the previous chapter we conclude that not every instrument produced an interpretable result. Thus, it was decided to change the design in aspects that seemed problematic (e.g. selection of music, colour cards, drawings, etc.).

Colour cards are to be left out all together because of the difficulties in finding out the exact reasons why the child chooses a specific colour to match the music. Drawing should also be left out for the reasons already mentioned in the evaluation of research procedures (chapter 5). The semi-structured interview, as well as the use of figure cards are going to be employed in the same way, according to the original design.

6.1.1 - REPERTORY GRID TECHNIQUE

In order to increase the validity of the repertory grid technique, it was decided that for every choice of the 'odd' one out children should give a *one word*

rationale for their choices. For example, "the first one is the 'odd' one because the instrument playing is a piano as opposed to strings in the other two extracts". In this way the one word rationale would be "piano", which according to the Spiral criteria would correspond to a Materials response. At the end, the choices of the 'odd' one will be compared with the one word rationale to find out to what extent choices have been made based on the original design of selecting an extract on the basis of its musical features.

6.1.2 - SELECTION OF SUBJECTS

The population sample consisted of children from the following school year and ages: Year 2: 6-7; Year 6: 10-11; and Year 9: 13-14. At this time, sixty children were interviewed, twenty from each age group. Children aged five were left out for reasons already mentioned in chapter 5.

6.1.3 - SELECTION OF MUSIC

It was decided that the extract selection should be re-organised according to the predominant feature, to optimise not only the 'odd' one choices, but also the choices of figure cards as denoting a clear degree of

activeness. The new selection comprehended a change of the first set, first music; instead of Debussy, "Suite Bergamasque" 4th movement, Rea, C. "Hired Gun", was chosen. The rationale for the change lies in the fact that since the remaining two extracts (Appendix 5), are pop music, children could have chosen the first extract on the basis of either Idiomatic analysis or Materials and this would not have been evident.

The third music of the last set was also changed from Bartok, B. "44 Duos Vol III - Duo No. 1" to Mendelssohn, F. "Octet in E flat Major, op 20" 4th movement. The rationale for this change was due to the fact that some Brazilian children seemed confused in a stylistic sense, regarding Bartok's music as sounding "strange", and completely different from the remaining music. This may be explained on the grounds that Bartok's Duos were composed in 1936, when classical music was undergoing major changes in terms of abandoning the tonal system.

The decision to change the first extract of the third set, from Moussorgski "Pictures at an Exhibition" to Debussy, C. "Suite Bergamasque" 4th movement was made as a way of matching the same expressive character of the third extract (Appendix 12), where both consist of active music, as opposed to a more passive music as in the second extract.

6.1.4 - INTERVIEW PROCEDURE

There are no changes to the original format, with the exception that colour cards as well as drawings were left out. The procedure was as follows:

a - Children listened to the music for the first time.

b - They chose the 'appropriate' figure card. The questions asked were the same as those stated in the method. It was thought that despite withdrawing colour cards as well as drawings, children should have the opportunity to record in some way what they were able to hear. Thus, after choosing the figure card, children were allowed to make some notes (written or figures), about what they had listened to. Children were offered the same three A4 pages (Appendix 4), that were designed for the drawings in the original design. The only difference is that presently, they had the opportunity to record their listening experience however they wished.

c - After that, children listened to the same extract again.

d - Then they were asked a set of questions (the

same as described in the original design), about the music. The answers were tape recorded.

e - After completing the procedure (a) to (d) with the first three extracts, children were asked to listen to the three extracts again, but at this time in a sequence, without interruption. After listening to the three extracts, and having in front of them the notes as well as the figure cards, children were asked to choose the 'odd' one out, part of the repertory grid technique.

6.2 - FIELD WORK IN ENGLAND

6.2.1 - GENERAL CONDITIONS

The present study consisted of playing music to and interviewing sixty English children divided in three age groups (Year 2, Year 6, and Year 9), with twenty children in each group. The interviews took place in seven schools, three primary and four secondary. The schools were selected on the basis of availability of schools to welcome a researcher and offering a range of subjects (this procedure in accordance with the Schools' Relation Office of the Institute of Education).

The subjects (children), were selected randomly[1] within each school, only taking into consideration the above schooling years. Every school (with no exception), offered the researcher a quiet room containing a tape player, table and chairs. The students were taken out of their normal school schedule, and the time average for each interview varied from 40 to 45 minutes for all age groups. No more than five interviews were conducted per day, thus avoiding taking children in late afternoons when they would be tired. The above procedure remained the same as the one carried out in the Pilot Study in Brazil.

6.2.2 - CHILDREN'S ATTITUDE TOWARDS THE INTERVIEW

As a general evaluation of children's attitudes it can be said that everyone acted in a very co-operative way. The procedure of the interviews was described briefly at the beginning for every age group, and no further explanation was needed as the interviews proceeded. Due to their clear and precise responses it can be said that every child understood exactly what was required, bearing in mind that English is the second language of the researcher.

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[1] out of a list of students within each school, corresponding to the schooling year in question.

The semi-structured interview section was tape recorded and later transcribed. This section went according to what was expected, that is, children had no problem in understanding the questions asked. The use of different questions had different effects on students. Some just repeated the same comments while others extended it. The researcher did not impose any pressure on children to answer further, once they had shown by words or gestures that they had nothing else to say. Again, the above characteristics are shared by the two field work studies.

As a general perception of the interview procedure it could be said that in the case of all three instruments (figure cards, repertory grid technique, and semi-structured interview), the subjects found little difficulty in using them, as with Brazilian children; firstly, because children found themselves able to choose a figure card after the first hearing; secondly, the fact that they listened once more to the extract before the semi-structured interview started, and having a figure card as an object of reference, helped them to recall the music heard; thirdly, the fact that they listened to the three extracts in succession, as well as having the figure cards in front of them, helped them to recall the three musical extracts by the time they had to choose the 'odd' one out (repertory grid).

The number of extracts (nine, 30 sec. each), which in some way imposed the length of the interview, was also proven to be satisfactory as in the case of Brazilian children. This was because the interview was neither too short (few extracts), nor too long, considering the average time over which children would be able to concentrate. The length of the extracts were also felt to be appropriate. The younger children appeared able to recall them easily.

6.2.3 - RESULTS BY INSTRUMENT ACROSS AGE

6.2.3.1 - FIGURE CARDS

The four figure cards were grouped into two as before, *active* and *passive* (Figure 1). In order to find out if there was an increase of appropriate choices among the age groups, appropriate choices from every age group were totalled. For every extract, 20 students of each age group had to choose one figure card. So, the total of 20 students times 9 extracts is 180. Out of those 180 choices only the number of appropriate choices were totalled. Table 6.1 offers a clear pattern of responses among the age groups.

Table 6.1: **CHOICES OF FIGURE CARDS** SUPPORTING **PREDICTION**

		YEAR 2		YEAR 6		YEAR 9	
R.P.	EXT	ACT	PAS	ACT	PAS	ACT	PAS
P	1	4	16	0	20	0	20
A	2	20	0	20	0	20	0
P	3	12	8	8	12	2	18
A	4	17	3	18	2	19	1
P	5	4	16	2	18	2	18
A	6	13	7	11	9	8	12
A	7	16	4	17	3	19	1
P	8	6	14	2	18	6	14
A	9	17	3	19	1	18	2

RP = Research Prediction

EXT = Musical extract

Table 6.2: **TOTAL OF FIGURE CARDS CHOICES SUPPORTING PREDICTION (OUT OF 180)**

YEAR 2	YEAR 6	YEAR 9
137	153	154

The results show that even the younger children were generally capable of recognizing the expressive character of the music and relate to a specific mood and/or action of the figure cards. It also shows that the use of figure cards as an assessment tool may be used to find out if children are able to associate a specific expressive character with figure cards which reflect specificlya mood or degree of activeness.

Different age groups tended to choose specific cards for different purposes. For example, younger children tended to choose cards based on their alleged action, i.e. if the figure appeared to be dancing, running or even because they 'like it more'. They also tended to relate their verbal comments with the actual figures by the time the semi-structured interview was applied. On the other hand, Year 6 children were able to describe the mood of the cards, e.g. if they were happy, sad, etc. Year 9 children tended to demonstrate a certain

reluctancy in choosing the cards, because they were static figures. Some of them were not satisfied in choosing only one card for the whole music, but rather would like to have more options and thus be able to describe the music in more detail, or as one student described "the changes of mood as the music goes on."

In general, it can be said that the use of figure cards worked as an important aid to help children recall the music heard by the time they had to choose the 'odd' one out (repertory grid technique). Children also tended to look at their chosen cards before responding verbally to the music. Although there is an increase of precision among the age groups, even the first group of children - Year 2 - was able to relate the music with the figure cards. What remains unanswered is the exact reason of why they chose 'x' or 'y' cards as appropriate, and in which way the cards worked as a clue to recall the music. The lack of absolute precision in relating the expressive character to the figure cards might be attributed to three things: Firstly, due to children's incapacity to recognise the expressive character; secondly, due to the kind of figure cards chosen to be part of this investigation, only two parameters (active and passive); and thirdly, to the kind of music presented, i.e. not being clearly active or passive. Despite these possibilities, results do show high agreement between the researcher's predictions and children's choices.

6.2.3.2 - REPERTORY GRID TECHNIQUE

The use of this modified form of repertory grid technique as part of the structured interview section was to find out children's stages of musical understanding by presenting them three musical extracts, out of which they had to choose the 'odd' one out, as well as offering a one word rationale for their choice. By doing that it would be possible to infer children's musical understanding according to their age group. According to the research design every set containing three musical extracts was chosen carefully so that each extract contained one striking feature corresponding to the three stages of the Spiral - Materials, Expression, and Form.

Since the results of repertory grid technique shown in the Brazilian data did not meet all expectation, it was decided to replicate the use of this tool with English children, but at this time making sure that they would have a chance to say more about why they have chosen a specific extract as the 'odd' one out. Thus, after choosing the 'odd' one out children were asked to give a *one word rationale* of why they have chosen specific music as being the different one.

Table 6.3 presents the final results of the repertory grid technique, which were totalled according to their age group and specific stage.

Table 6.3: **REPERTORY GRID TECHNIQUE: CHOICES ACCORDING TO THE SPIRAL CRITERIA**

	YEAR 2	YEAR 6	YEAR 9
MATERIALS	21	19	22
EXPRESSION	22	37	36
FORM	17	4	2

The results do not show a specific pattern in terms of increasing responses in terms of Form in the older group, or a decrease in responses in terms of Materials in older age groups. On the other hand, the inspection of the one word rationale data, given by most choices[2] of the 'odd' one out (Table 6.4 and Appendix 13), suggests the reverse and predicted pattern.

[2] Some children did not give a rationale.

Table 6.4: **ONE WORD RATIONALE FOR REPERTORY GRID CHOICES**

	YEAR 2	YEAR 6	YEAR 9
MATERIALS	39	25	20
EXPRESSION	18	33	36
FORM	0	1	4

CHI SQUARE = 18.5918 DF = 4
PROBABILITY < .001

It also suggests that the tendency is of an increasing proportion of Expression responses over age, and a decrease in terms of Materials responses. From inspection it is obvious that there are less comments about Form, although showing a slight increase from Year 6 to Year 9.

Table 6.5 attempts to demonstrate the level of agreement between the choices of the 'odd' one out and the one word rationale. Each of the 20 children had to make a total of three choices (corresponding to the three sets of music presented), 60 choices per age group.

Table 6.5: **REPERTORY GRID PER YEAR GROUP: COMPARED RESULTS BETWEEN THE 'ODD' ONE OUT CHOICES AND THE ONE WORD RATIONAL (OUT OF 60)**

YEAR 2	YEAR 6	YEAR 9
30	49	47

The results shown in Table 6.5 represent a relatively low level of agreement between the choices and the rationale given among all age groups, especially the first one - Year 2 - only 50%. The repertory grid technique, did not give consistent results. The reasons why this research tool[4] seems inappropriate to be used in assessing children. It relies too heavily on the ability of children to make comparisons. In the case of music it poses a problem due to the fact of being a temporal form of art, and thus ephemeral, which is distinct from the way the repertory grid technique is usually applied in psychology where the elements are presented in form of words. Music, being ephemeral by nature, relies on the memory of the listener, which can be a problem especially with the younger age group (Year 2). The way in which the extracts were chosen (each one presenting a striking feature in each of the Spiral stages), also presents an

[4] In its original form (choices of the 'odd one out'), as denoting a specific stage of musical responses.

inherent problem because every musical 'statement' necessarily contains all three dimensions of musical criticism (Materials, Expression, and Form). The third aspect refers to the fact that, given the child's opportunity to choose which one is the 'odd' one out, may prompt the child to choose the one which offers them the most obvious feature. This has been confirmed by the rationale given for each choice. Thus choosing in terms of Materials and Expression stage features may also denote children's levels of confidence in terms of their stage of musical development.

6.2.3.3 - SEMI-STRUCTURED INTERVIEW

The semi-structured interview was the main data gathering source due to its wide possibility of gathering information on how children respond to music through listening in audience. It offers the possibility of applying the quantitative method of analysis as a result of classifying and aggregating children's responses. Thus, both approaches - qualitative and quantitative - will be applied to the semi-structured interview results.

Usually, the problem faced by qualitative researchers is how to reduce and classify the data acquired. It is important to state that qualitative researchers do not share the reliability expectation, as

the quantitative researchers do[5]. Different people with different interests may see the research environment or even the data in different ways. If we take this research into consideration, one may argue that the interviews could have been carried out in a different way. As far as the data is concerned, one may also be interested in the sophistication level of children's referentialist responses. Thus the reduction and classification of the data will obviously reflect a specific framework adopted.

In the case of this research, developing categories was not a problem since the prime task was to analyze if children's responses could be mapped according to the Spiral sequence. As it happened in the Pilot Study, there were responses that were not fully anticipated by the original Spiral criteria. Thus the same extension of it was used to classify the responses (See section 5.5.9 - Extension of the Spiral Criteria, Chapter 5).

The procedure employed to analyze the semi-structured interview data (Appendix 14), was the same as the one used in the Pilot Study: First, students were grouped by year (age groups). Second, every student's response was analyzed, and third, each extract response was classified by the highest Spiral stage of response reached in each extract. Each extract response was taken

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[5] Bogdan, R.C. and Biklen, S.K. (1982). Qualitative research for education: an introduction to theory and methods. Boston, Mass.: Allyn & Bacon Inc.

as one comment which the researcher carefully tried to map according to the predicted Swanwick's Spiral Criteria for Listening (Appendices 14 and 15). To accomplish this task a special matrix has been devised in order to classify each extract response (Appendix 10). To proceed with the extract analysis, Swanwick's criteria for listening in audience (Appendix 9), as well as the researcher's extended criteria were used (Section 5.5.9 - Extension of the Spiral Criteria, Chapter 5).

The rationale of analyzing children's whole responses for each extract conveys the principle of this research, i.e. how children construe their musical experience through listening in audience and if there is a level of agreement which consequently could be mapped according to the Spiral. If, on one hand, there is a degree in which listening experiences consist of idiosyncratic responses, on the other hand, there may be a clear pattern among the age groups' responses which would be capable of being mapped according to the Spiral sequence of musical development.

The additional feature, in relation to the Pilot Study analysis, was to analyze children's responses according to its cumulative nature, meaning whether children who reached the second and third stages (Expression and Form respectively), would tend to integrate early stages into their responses. Appendix 14

presents a sample of children's interview responses, and Appendix 15 presents samples classified according to the Spiral criteria. Thus if a child's response takes this format:

"Someone was playing the piano.
Very fast music.
Nice music and quiet."

the highest Spiral stage of this response clearly corresponds to the Materials stage.

If the response below is taken,

"When you go to a ball you might have this music for dancing.
Ballet dancing.
Person playing the piano."

it is possible to see that the highest level of this response correspond to the Expression stage of the Spiral where there is an attempt to associate the music with a particular scene or image due to the perception of the expressive gestures of the music. It is also possible to see that the above extract response does not contain a cumulative element. Instead statements are presented in a rather 'straight' way.

On the other hand if there is a response such as:

"Sounded happier because it has a bass made by the cellos, and the violins went high. They played different melodies, because the cellos

played quite low and the violins played high notes.

It sounded like someone was being chased".

the highest stage is not only classified under Expression stage, but also the comment was made in a cumulative way - "sounded happier *because* it has a bass made by the cellos and the violins went high." Thus, this response presents some clear evidence that the child identifies both the mood of the piece (Expression stage), and identifies what kind of musical materials makes the music sound like that. In this case the rationale has been given in terms of Materials stage.

A further example will help to clarify what is meant by cumulative response in the present research.

> "Very dramatic, very loud and low beat chords, and there were strings playing over the top and playing very down the scale (in a minor scale). It started very high and shrill, all very loud and then they went down, then there was a short gap, and then they carried on going down lower. Then they started again on a different key and then higher and went down all chords, and it was quite slow and very dramatic."

According to the Spiral criteria, this extract response was classified under a Form stage, because it shows an understanding of some structural elements of the

discourse, and a strong element of 'speculation' of how the music proceeds. It was also classified as a cumulative response because it shows an awareness of the expressive character of the music, not only in terms of Materials, but also in terms of Form - how the music is structured - thus integrating the three stages into his/her response.

After having classified every response of every age group, according to the highest stage reached within the Spiral, (Appendix 10), a further reduction of the data proceeded. This time, by counting every student's highest responses, from every age group and placing them in an appropriate table. The final column of the Appendix 16 table refers to the amount of cumulative responses given by every age group. Following that, all responses given by each age group according to the Spiral stages was totalled. The purpose of this numerical reference was to apply a simple statistical test to see to what extent there is a difference of stages reached among the Year groups. Table 6.6 shows the final results of the number of highest Spiral stages of responses given by each age group.

Table 6.6: **HIGHEST LEVEL OF MUSICAL CRITICISM DISPLAYED IN SEMI-STRUCTURED INTERVIEW: ENGLISH DATA**

	YEAR 2	YEAR 6	YEAR 9
MATERIALS	45	4	2
EXPRESSION	135	167	92
FORM	0	9	86

Chi Square = 242.2172

Probability < .001

DF = 4

Figure 6.1: **HIGHEST LEVEL OF MUSICAL CRITICISM DISPLAYED IN SEMI-STRUCTURED INTERVIEW: ENGLISH DATA**

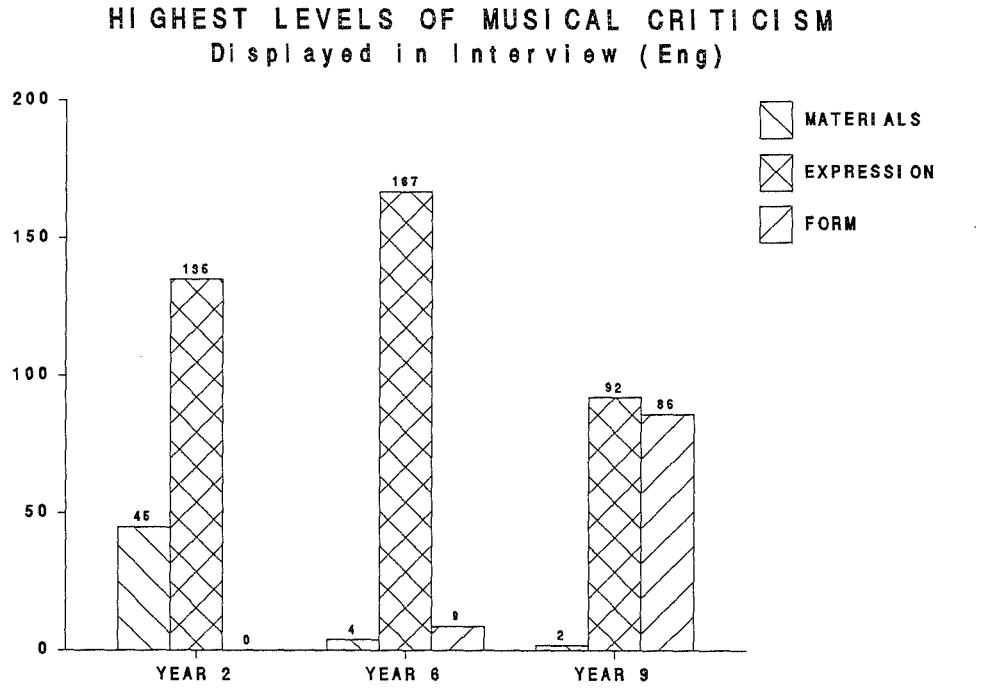
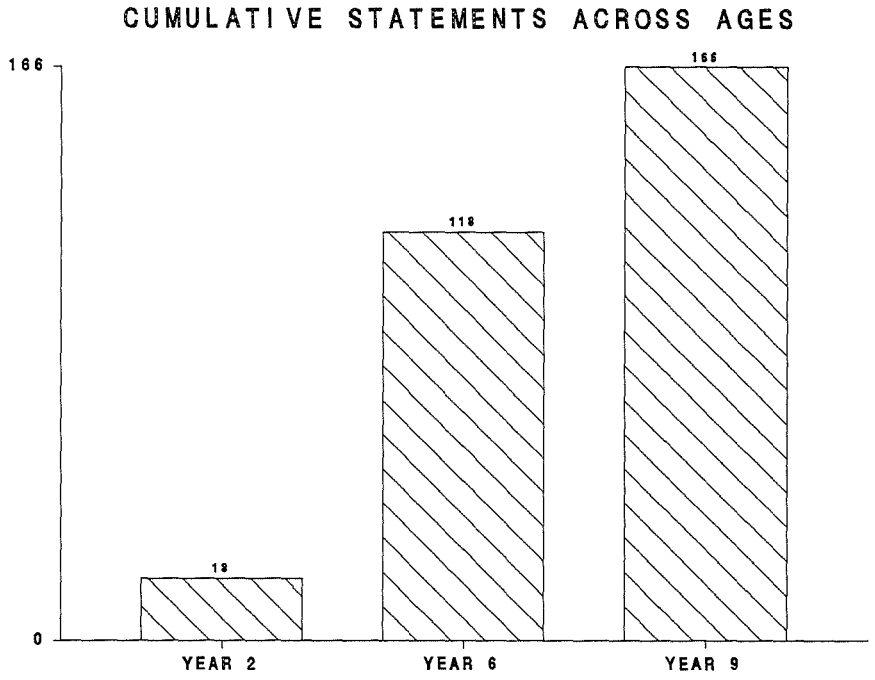


Figure 6.1 and Table 6.6 show a shift of Materials and Expression response in Year 2, to a predominant Expression response in Year 6, and a leading increase of Form responses as well as Expression ones in Year 9. The observed distribution is therefore unlikely to have arisen by chance. There is a sharp increase of Expression and Form responses among Year 6 and Year 9 respectively. (Figure 6.2 shows the increase of cumulative responses

among older age groups).

Figure 6.2: **CUMULATIVE STATEMENTS ACROSS AGES**



6.2.4. INTERPRETATION

According to the Spiral Theory the expected stage for Year 2 children was Materials, however they do show a notable awareness of the expressive gestures shown by every instrument of measurement. This may be due to the fact that within the present study the youngest group were already children who had some formal music input, as

opposed to the sample used by Swanwick and Tillman[6] in the composition study, where the youngest child was 3 years old. In this case it is expected that Year 2 students would begin to respond in terms of Expression stage, although it is the age group that has the most substantial number of responses in terms of Materials confirmed by the one word rationale of the repertory grid (Table 6.4), and in some ways by semi-structured interview (Table 6.6).

Although Year 2 children show an understanding of the expressive character of the music, there is no articulation about the mood, or even a clear rationale of why the music sounds sad or happy, etc. Instead there is only a general impression of the music, e.g. "it is loud", "piano playing", "it is happy", etc. Even though there are some Expression stage comments, these are mainly in terms of Personal Expressiveness. As far as the Expression stage is concerned, it does account for two distinct phases, and to say that specific responses typically belong to that stage, it should fulfil the phases' prediction (Personal Expressiveness and Vernacular), otherwise it may be counted as a mere stage mixture between Materials and Expression.

If the results of the three instruments are

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[6] Swanwick, K. and Tillman, J. (1986). The sequence of musical development: a study of children's composition. British Journal of Music Education, 3, 3, 305-39.

combined, it is possible to conclude that although Year 2 show an understanding of the expressive gestures of the music, they still tend to concentrate mainly on the Materials of the music, thus confirming what was anticipated by the Spiral criteria.

Year 6 responses show in every instrument of measurement a concentration, or typical behaviour characterised by the Expression stage. Figure cards results show a substantial increase of choices according to the researcher's prediction, compared to Year 2 (Table 6.1). The one word rationale repertory grid (Table 6.4), also shows a drop in Materials responses, at the expense of more choices in the Expression stage, while results from the semi-structured interview show an almost absolute evidence that Year 6 children's typical behaviour (response) is placed on the Expression stage. As it would be expected, Year 6 gave some responses purely in terms of Materials and others in terms of Form, but as an overall result there is little doubt that their typical responses are classified as belonging to the Expression stage. This is because most responses of Year 6 reached the Vernacular phase mainly characterised by the presence of some technical analysis, e.g. accounts of repetitions, phrase shape, etc. More than any other group, this one presented a greater articulation of the associations made with images, scenes, and small stories.

Another characteristic of Year 6, as opposed to Year 2, refers to the presence of a rationale of the mood of the piece given in terms of Materials. In this research, counted as a cumulative response (Figure 6.2), e.g. "it sounds sad *because* the lower strings are playing low notes." Thus, although Year 2 responses reached the Expression stage, they do not seem qualitatively similar to responses given by Year 6, which not only reached the two phases (Personal Expressiveness and Vernacular), but also offered clear rationales in terms of the previous stages characteristics. Figure 6.2 presents a graphic describing the increase of cumulative responses among Year groups.

Year 9 responses through figure cards (Table 6.1), and one word rationale of repertory grid (Table 6.4), are very similar to those of Year 6, except that in the results from the repertory grid there is a significant drop in Materials and a slight increase in Form responses. On the other hand, when it comes to the results of the semi-structured interview (Table 6.6), the results are considerably different from Year 6. As Table 6.6 and Figure 6.1 showed previously, there is a sudden increase in responses classified under Form stage, and still a number of responses in terms of Expression. There is also a visible increase in the numbers of cumulative responses (Figure 6.1), which in some way denotes that the higher one reaches on the Spiral sequence, the more one

tends to interrelate previous stages.

The added feature of Year 9 responses regards the level of sophistication of comments in relation to the musical structure, i.e. how the music is built up. There is a greater integration of the levels of musical criticism, which can be seen by the number of cumulative statements presented (Figure 6.1). They seem to be able to analyze the music in a kind of tri-dimensional way. What makes those statements different from the previous Year groups, is the way the responses are integrated, i.e. there is a time line on their analysis, shown by the way they are able to depict how music proceeds, a feature which did not appear in younger children. Year 9 responses do account for a significant increase in terms of Form response in comparison to years 2 and 6, which makes it possible to suggest that, not only can listening in audience responses be mapped according to the Spiral sequence, but also that responses change qualitatively with age, thus confirming the Spiral sequence proposed by Swanwick and Tillman.[7]

[7] Swanwick, K. and Tillman, J. (1986). op. cit.

CHAPTER 7: CONCLUSION AND IMPLICATIONS

7.1 - CONCLUSION

The data gathered by both studies highlights some of the issues raised in the theoretical framework of this thesis. These relate mainly to the developmental adequacy of the Spiral Theory, and to the analogy drawn by Swanwick, between Piaget's theory on play development and the Spiral Theory of Musical Development.

It has been argued in chapter two that the Spiral can be conceived as a developmental theory, once it conforms to general developmental characteristics, named as *Temporality, Cumulativity, Directionality, New Mode of Organisation, and Increased Capacity for Self-control*. The empirical data, especially the English one, validates the above claims.

The Temporality characteristic which stands for the fact that changes tend to occur over time, appears very distinctively among different age group's responses. In the case of music development it also reinforces this characteristic that is more notable among children who had been musically educated (e.g. English children), in a sense suggesting that the Spiral's Theory prediction does rely heavily on musical education.

The Cumulativity characteristic has been an object of close attention during the analysis of the data due to the fact that Swanwick[1] claims that the musical development process is cumulative. Chapter two of this work extends the author's claims a little further and were confirmed by the empirical data through the way Expression and Form stage responses were articulated by English children, i.e. giving a rationale in terms of early stages. However, there were some responses that reached the Expression stage which did not appear to have a rationale and therefore could not be accounted as cumulative. Those responses may be explained on the terms that every developmental process presents a degree of stage mixture,[2] where although some responses reached the Expression stage, they are not consolidated yet. This is mainly the case of Year 2 children.

The Directionality characteristic was also observed especially within the semi-structured interview data. Children's responses showed a sense of progression towards greater musical understanding among older children. As stated in chapter two, developmental changes in musical development are progressive to the extent that they proceed toward an increasing complexity in the way

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[1] Swanwick, K. (1988). Music, mind, and education. London: Routledge. p. 67.

[2] Turiel, E. (1969). Developmental processes in the child's moral thinking, in Trends and Issues in Developmental Psychology, eds. P.H. Mussen, J. Langer and M. Covington. New York: Holt Rinehart and Winston.

people respond to music.

However, what is likely to occur, especially in listening in audience responses, is that one may or may not wish to respond in its actual stage of development. This ambiguity has been observed especially in English data, where although older groups, e.g. Year 9, have shown to be able to respond in terms of Form, sometimes found themselves compelled to respond in terms of Expression as the highest level. Most of the children did not respond only in one highest stage. For example, Year 9 responses were given in terms of both Form and Expression stages. This exemplifies the degree of freedom to which one may respond to music when open-ended questions are asked.

The English data, especially through semi-structured interview, offered some clear evidence that responses between younger and older children confirm the New Mode of Organization characteristic discussed in chapter two. This relates to the fact that, each stage of musical development constitutes a different way of responding to the same object - musical extract.

As it has already been stated by Swanwick,[3] and in this work (chapter two), the word *stage* does not refer to the Piagetian tightly formulated concept of stage,

[3] Swanwick, K. (1988). op. cit.

although some critics such as Hargreaves and Zimmerman[4] may still use it in this way. According to them,

> since the four levels of the Spiral are age related, and since the first three are purportedly based on Piagetian theory, each loop is in effect something like a Piagetian stage.[5]

In fact what Swanwick's[6] writings seem to suggest is that the relationship established between the stages and levels and children's ages, serves not only to reinforce the Temporality issue, but also to relate to the fact that changes tend to occur over time and this seems to be more related to the education factor (systematic engagement with music), rather than with age.

As has been argued throughout this work, Swanwick's search for a psychological understanding surrounding musical development did not stop in its developmental claims. Rather he went further in a search for a psychological rationale capable of sheading light on the psychological process underlying musical development. He stated quite clearly that,

> Unless the arts can be seen to develop mind (in the broadest sense), their function cannot be ultimately be understood, nor can their role in education. Education is surely more than

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[4] Hargreaves, D. and Zimmerman, M.P. (1992). Developmental theories of music learning, in Handbook of Research on Music Teaching and Learning, ed. R. Colwell. MENC. New York: Schirmer Books.

[5] Ibid., p. 381.

[6] Swanwick, K. (1988). op. cit.

> merely having 'experience', or acquiring a repertoire of skills and facts. It has to do with developing understanding, insightfulness: qualities of mind.[7]

Thus, what distinguishes Swanwick's psychological investigation from most previous work in the field, is the fact that he does not search for psychometric understanding of the musical development process, but rather for similar principles underlying different developmental processes, in this case - musical development and human development. That is the reason why, throughout this thesis, the psychological background of the Spiral Theory has been referred to as *analogous* to the dimensions of musical criticism.

This thesis has carried out a critical review of the terms of the analogy established between the dimensions of musical criticism and Piaget's development of play (chapter three). There was also the attempt to extend the analogy a step further by discussing the relationship between the process of assimilation and accommodation, and the Spiral phases (left and right hand side respectively).

The investigation of the Spiral Theory's psychological background (its developmental adequacy and its analogy with Piaget's theory) brought numerous advantages to the present work, being the most important

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[7] Ibid., p. 36.

one, the fact that the Spiral can be considered a musical mind model, and thus capable of being used as an assessment criteria.

Further empirical investigation on composition[8] and now listening in audience assessment has confirmed Swanwick's early claims which are ultimately concerned with setting up an assessment model capable of being used across the three musical activities - composing, performing, and listening. What, at that time, remained a possibility has now, through the present work, been confirmed as feasible in the case of listening in audience.

Having argued that the empirical data confirms the claims that the Spiral is a developmental theory, and thus capable of being used as an assessment model, what needs to be discussed is the validity of the method used to assess children's listening in audience responses.

This work has searched for a new method to assess listening in audience, in the sense of presenting a new alternative to overcome the problem existing. The use of the multi-instrument method, especially the one employed with English children, has proven to be an important approach to assess listening in audience responses,

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[8] Swanwick, K. (1991a). Further research on the musical development sequence. Psychology of Music, 19, 1, 22-32.

bearing in mind its alleged difficulties as being a subjective enterprise. It can be said that the method showed a high degree of internal validity, with the exception of the modified form of the repertoire grid technique.

The method although complex and time consuming, gives some important indications that the listening domain should preferably not be assessed using a single tool, especially in the case of younger children for reasons already mentioned. The use of combined assessment tools such as, figure cards, repertory grid technique and semi-structured interview, has been shown to be feasible despite its limitations of exactly equating the results, especially as far as quantitative analysis is concerned. Being aware of these limitations, the present work chose only to estimate the relationship between the responses of different instruments, instead of drawing absolute and precise conclusions between them. This thesis has also argued that the use of a single assessment tool may restrict the validity of a method especially in the case of trying to assess children's whole audience-listening experience, as opposed to assessing rhythmic and/or melodic ability, etc.

The use of a semi-structured interview as the main data gathering source for both Brazilian and English children, raises some important issues. It can be said

that verbal means of communication is still one of the richest sources of gathering information about the way people experience music for two possible reasons: first may be the case that verbal language is one of the most developed means of communication, at least in Western culture, as opposed to other symbolic means such as pictorial, gestural, etc.; second, is because the semi-structured interview technique offered the possibility of obtaining information in a more open-ended sense. In other words, children were offered the possibility of talking about their listening experience in a wider sense, due to the fact that the questions asked were open-ended (e.g. "what can you tell me about the music you have listened to?", instead of framing their answers by asking precise questions such as, "what kind of instruments were playing?").

Another issue is the fact of whether or not verbal fluency across ages may have had influence on the results of both field works. In other words, is it possible to rely on verbal accounts once the population is of such a wide age-range? As a first outlook it would be possible to suggest that older children have a greater verbal fluency than younger ones, and thus the main reason why older ones would be able to give a Form stage account of their musical experience as opposed to Materials given by younger children.

As a starting point, it can be stated as common sense that "auditory perception involves the ability to organise and interpret what is heard,"[9] and that organisation and interpretation is likely to be different among age groups. Here is where the use of such different population samples, e.g. Brazilian and English, help to clarify such assumptions. Although they refer to different nationalities and the method of data collection varied slightly between research in Brazil and in England, it is possible to identify the stagnation of Brazilian children in the lower stages of the Spiral. On the other hand, there is an observable progression towards the upper stages of the Spiral sequence in English children's responses.

In this case, it would be possible to start with the assumption that Brazilian as well as English children have the same cognitive development according to their ages.[10] So, why did Brazilian children not reach the Form stage, nor display a higher degree of articulation in older group verbal responses? The answer could be simply because they do not have formal music education in schools, as English children do.

The assumption that older children are capable of

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[9] Trimper, C. (1980). The use of music to develop pre-language and early receptive language skills. Unpublished paper. p. 4.

[10] Here the researcher is not taking social variables into consideration, such as environment, cultural differences, etc.

listening more perceptively than younger ones is important here. It could be said that so far there may be no answer to this question because the degree in which this issue is still unresolved is directly related with the limited instruments of assessment available. However, the present research does give indications that through musical education, not only does the capacity of listening to music in a detailed way increase, but also children's capacities to articulate their musical understanding through verbal means of communication increases. It may be that the capacity to articulate/express one's listening experience through verbal means may be linked with one's degree of musical understanding. The contrary argument is unlikely. To clarify the above, let's take three typical responses given to the same music by three children:

Child 1: "It is beautiful music. Very loud. A violin playing."

Child 2: "A violin and a trumpet playing. Not so fast."

Child 3: "It was quite slow, 2 beats in a bar, and started with a low instrument which played in it, and carried on through the whole piece playing 2 beats, which were not the same notes, quite jumpy. On the top of this there were high string instruments playing the main tune,

and they were very smooth, and there are quite a few running bits, and the notes were slow. The whole tune is quite quiet, and it sounded like very slow water running. Quite sleepy and peaceful."

It is possible to observe that the first two are qualitatively similar, while different from the third one. One may say that the first two correspond to a less musically developed child and may even suggest that they belong to younger children who have less verbal fluency. However, the above response corresponds to: First, to a 13 year-old child from Brazil; second to a 6 year-old child from England, and; third to a 13 year-old child from England.

This brief example suggests a rebuttal of the proposition that only age, and thus general cognitive development, accounts for a more elaborated response. On the contrary, the examples come to confirm what Swanwick suggested:

> if the environment is particularly rich, then the sequence may be followed more quickly. The opposite may also, unfortunately, be true: in an impoverished musical environment, development is likely to be minimal, arrested.[11]

In other words, in order to reach the higher stages of the Spiral, systematic engagement with music is of

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[11] Swanwick, K. (1988). op. cit., p. 81.

paramount importance. The more one has access to music in a systematic way, the more one has the chance to develop musical understanding.

In summary, the main contribution of this thesis centres in three aspects: first, the demonstration through a theoretical discussion that the Spiral is not only a developmental theory capable of contemplating the three musical activities or parameters - composing, performing and listening - but that it also offers a map of musical mind, of how people develop their musical understanding; second, it offers an alternative method - multi-instrumental - through which listening in audience can be assessed; third, the results of the present study represent the first empirical evidence from two different sets of data (Brazilian and English children) that audience-listening responses can be mapped according to the Spiral model, thus confirming its suitability to be used to assess listening in audience responses.

7.2 - IMPLICATIONS

At this point, it is possible to draw some implications of the present work for three specific areas: the Spiral Theory of Musical Development, further research in audience-listening assessment, and finally, music education.

Although some aspects of the Spiral Theory have come under scrutiny throughout this work, there are still some unresolved issues that deserve closer attention. The first one consists of an investigation of whether or not Materials, Expression, Form and Value, encompass all dimensions of musical criticism, i.e. if these are the only dimensions one experiences in music. The second is concerned with the fact that, although Swanwick attempts to set up a model of musical mind, by drawing an analogy between play development and Musical Development, the theory fails to explain the psychological process people go through when developing their musical understanding.

Until further evidence comes to confirm the psychological processes involved in the development of musical understanding one can only rely on empirical confirmations of the possible ways people develop musical understanding. Meantime, this thesis provides empirical evidence which shows that the Spiral Model can be used as an assessment model through which musical understanding can be assessed across at least two musical activities - composing, and audience-listening.

Equally important, are the means through which research is carried out to assess audience-listening responses. As was demonstrated through this thesis, it is important to be aware that in the case of multi-instrumental method, each instrument of measurement

reveals different aspects of effectiveness as well as limitations to extract information about children's musical understanding. Another difficulty refers to the limitations of equating the responses (e.g making a cross-analysis between verbal answer vs figure cards vs repertory grid technique, etc.). In this sense further research has to be carried out, so as to improve the validity and reliability of interrelating different techniques and instruments of measurement.

However, it is important for researchers and teachers to be aware that audience-listening assessment will present limitations, as opposed to assessing composing and performing where there is an objective musical product. It may be the case that no matter how much research is carried out using a multi-instrumental method, there may be no way of precisely integrating them, and doubts about how people experience music through audience-listening will always remain. On the other hand, these are not sufficient arguments to simply dismiss audience-listening as an important means of assessing children's musical understanding alongside composing and performing.

Besides the methodological problem of assessing audience-listening, this thesis has raised another important issue. This refers to the use of two different population samples, i.e. children who never had music

education as a formal subject in schools - Brazilian children - and children who are musically educated - English children. Unfortunately, the present work was not able to make comparisons for reasons already discussed (e.g. changing of method, lack of control of social variables, etc.).

On the other hand, the data of both field works offer some indication that English children moved faster towards the upper stages of the Spiral as opposed to Brazilian children. This is probably due to the fact that English children are musically educated. This highlights Swanwick's anticipation that in the case of an absence of formal music education, musical development is likely to be minimal.[12]

The problem of whether or not musical understanding improves through education has been, for a long time, the concern of music educators as well as researchers within the psychology of music field. Therefore it would be recommended that further research, properly designed to enable comparisons, should be carried out in order to find out the exact differences in terms of musical development between populations who have and have not had music education as a formal subject in schools.

Finally, the implications of this thesis for music

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[12] Swanwick, K. (1988). op. cit.

education are manifold, but the most important to be highlighted are: first, it offers a critical analysis of one of the most comprehensive theories of musical development and models of musical assessment, based on the comprehensive nature of musical experience - the Spiral Theory of Musical Development. As it has been demonstrated previously, the verification of whether or not the Spiral is a developmental theory has direct implications concerning its use as an assessment model. Thus as far as assessment is concerned, this work comes to confirm the feasibility of using the Spiral criteria to assess audience-listening responses. So far, music educators can feel reasonably confident that the same criteria can be used to assess two musical activities - composing and audience-listening; second, it comes to reinforce the view that listening in audience should not only be seen as an independent activity which deserves special attention from music educators but also as an activity which offers great potential, alongside composing and performing, as means of assessing children's levels of musical understanding; the third, refers to the method of assessing audience-listening. In this sense this thesis has proposed a new assessment alternative, that of the use of a multi-instrumental method. Its feasibility to be used in a routine basis in schools still remains to be seen. On the other hand this work has demonstrated that verbal language, for example, although a very rich one, is not the only symbolic system

capable of transposing the subjective experience with music into objective reality. Thus, it is hoped that the method and criteria used here will offer teachers some alternative means to approach the problems surrounding audience-listening assessment.

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APPENDIX 1

GLOSSARY

1) MUSICAL PARAMETERS: refer to the three musical activities - composing, performing, and listening.

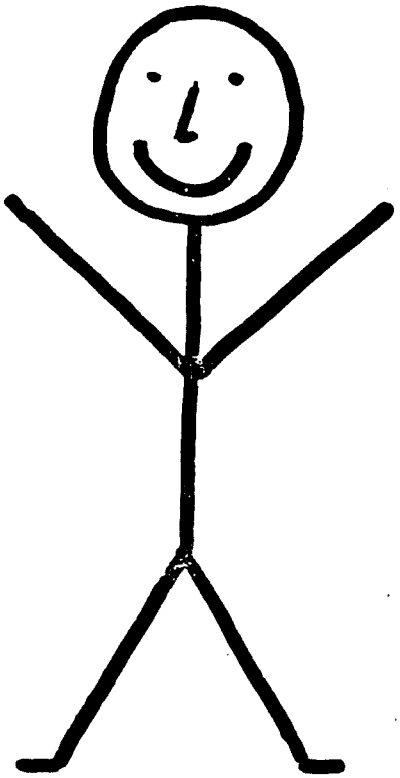
2) DIMENSIONS OF MUSICAL CRITICISM: refer to the four dimensions - Materials, Expression, Form, and Value.

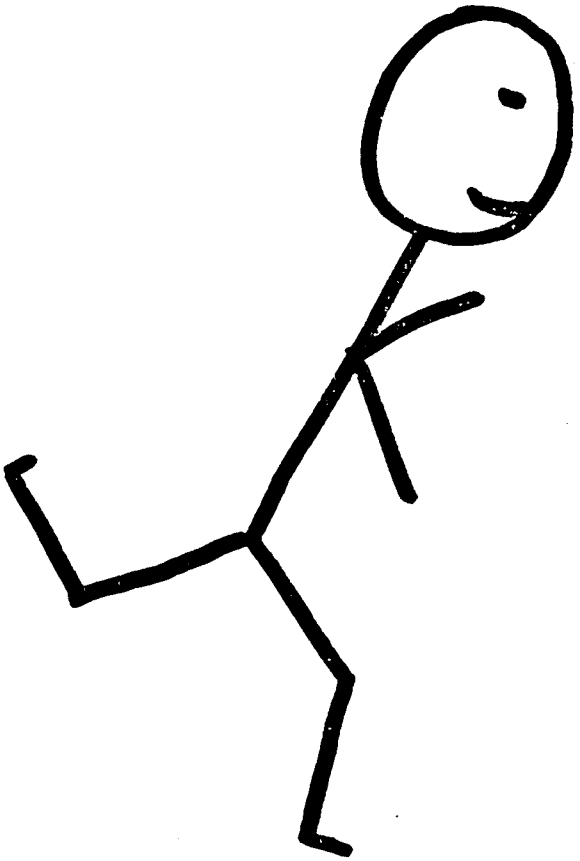
3) PSYCHOLOGICAL LEVELS OR MODES: refer to the Piagetian modes or levels of play development - Mastery, Imitation and, Imaginative Play.

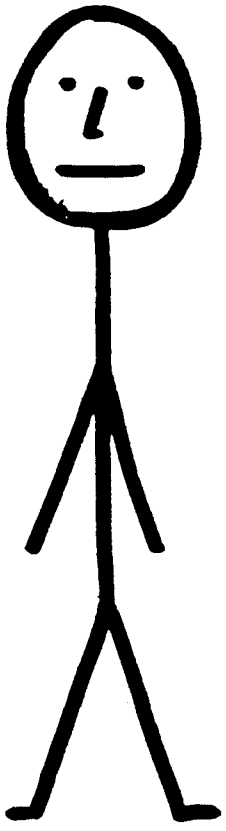
4) SPIRAL DEVELOPMENTAL STAGES: refer to the stages of musical development - Materials, Expression, Form, and Value. The four stages may be called the four 'dimensions of musical criticism', depending on the context they are used.

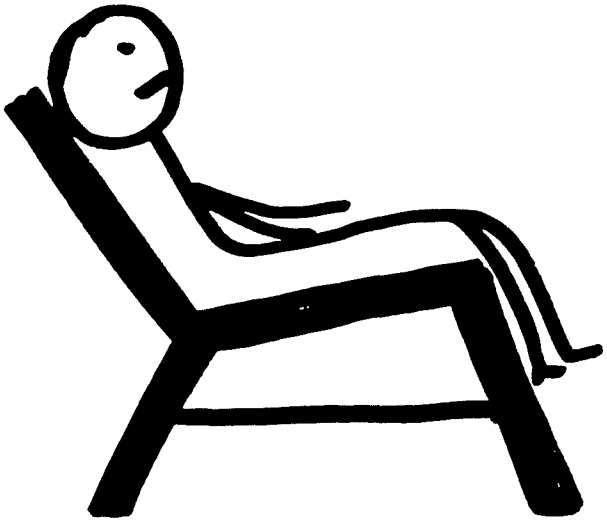
5) SPIRAL PHASES: refer to the phases within the musical stages - Sensory, Manipulative, etc.

6) MUSICAL RESPONSE: Ways in which people respond to music through one or more of the three parameters (composing, performing and listening).









APPENDIX 4

NAME: AGE:

SET 1

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NAME: AGE:

SET 2

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NAME: AGE:

SET 3

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LIST OF EXTRACTS - PILOT STUDY

SET 1:

MATERIAL:

Debussy, C. - "Suite Bergamasque", Passepied
(4th movement)

Tamas Varsay, Piano

1970 - Polidor International, No. 429 517-2

CD: 001-035

TAPE: 005-015 / 017-127

EXPRESSIVE CHARACTER:

Warwick, D. - "Heartbreaker"

1989 - CBS United Kingdom LTD, No. MOOD CD6

CD: 001-026

TAPE: 029-034 / 036-044

FORM:

Collins, P. - "That's Just the Way it is"

1989 - Virgin Records LTD, No. CDV 2620

CD: 001-028

TAPE: 046-051 / 052-059

SET 2:

MATERIAL:

Chopin, F. - "Waltz No.1 in E flat Major, op.18"

Jean-Marc Luisada, Piano

1989 - Delta Music, No. 15 604

CD: 001-026

TAPE: 061-068 / 070-077

EXPRESSIVE CHARACTER:

Dvorak - "Serenade for Strings in E, op. 22" (1st movement, Moderato)

Scottish Chamber Orchestra

Innovative Music Productions LTD, No. PCD 928

CD: 001-037

TAPE: 078-087 / 089-098

FORM:

Haydn - "Symphonie in D, No. 101 'Clock'"

Wiener Symphoniker

1989 Philips Classics Production, No. 422 973-2

CD: 001-028

TAPE: 099-106 / 108-114

SET 3:

MATERIAL:

Moussorgski - "Pictures at an Exhibition"

Jeno Jando - Piano

1988 - Pacific Music Co LTD, No. 8.550044

CD: 001-027

TAPE: 116-122 / 123-128

EXPRESSIVE CHARACTER:

Elgar - "Introduction and Allegro, op. 47"

String Quartet, Academy of St Martin-in-the-Fields

1989 - The Decca Record Company LTD, No. 421 384-2

CD: 001-024

TAPE: 129-134 / 135-140

FORM:

Bartok, B. - "44 Duos Vol. III"

(Duo No. 1)

The Endellion String Quartet

1989 - Virgin Classics LTD, No. 259 600-231

CD: 001-025

TAPE: 141-147 / 148-153

NAME: JULIA C-3 AGE: 7

SET 1

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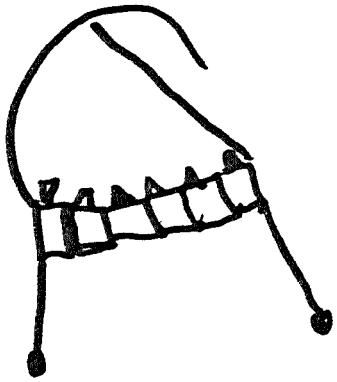

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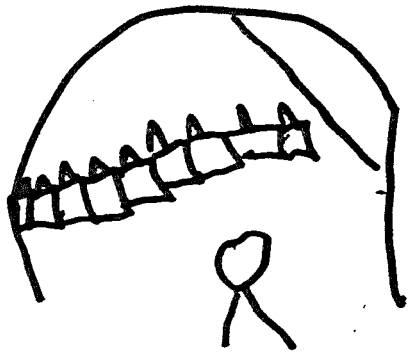
SET 2

4)



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SET 3

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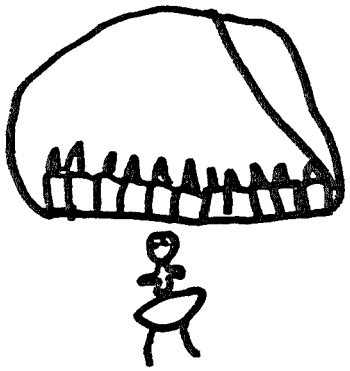

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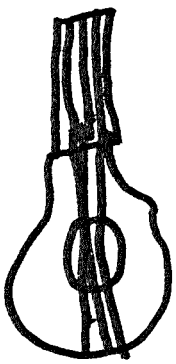

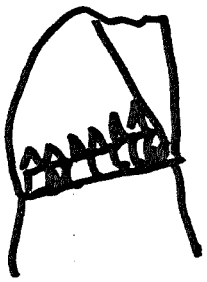

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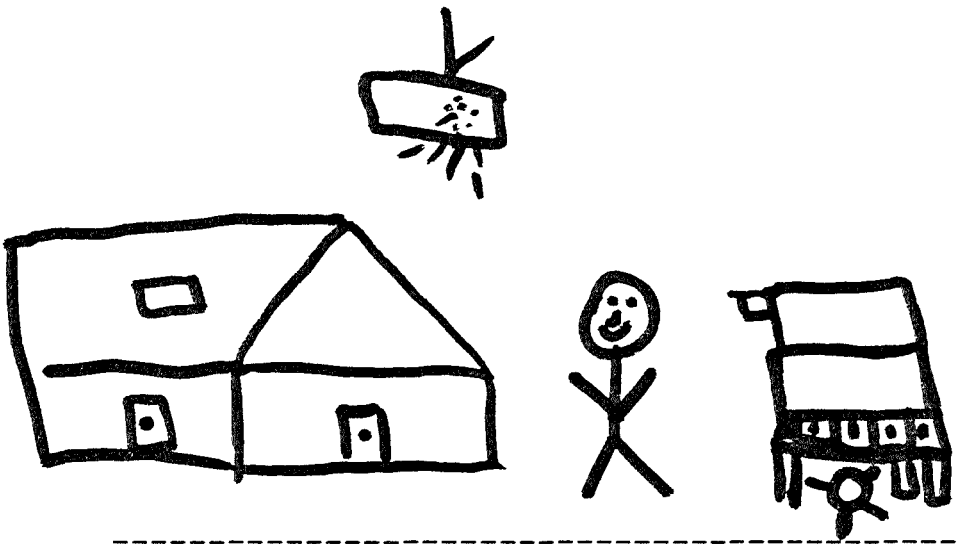

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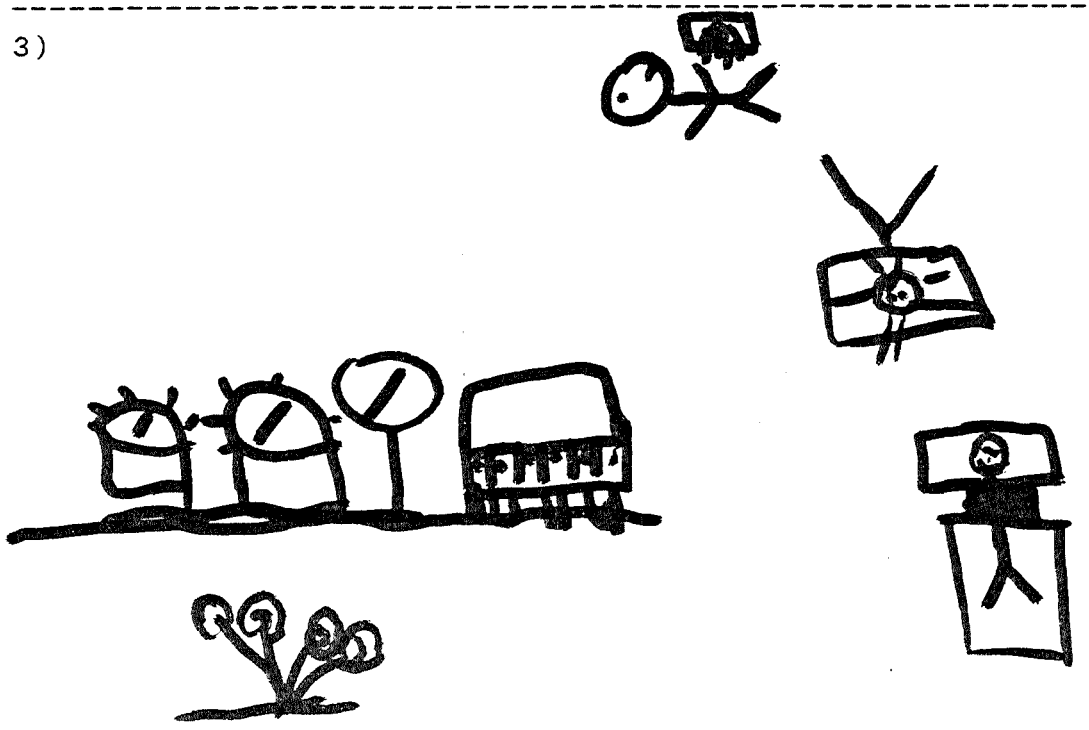

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SET 2

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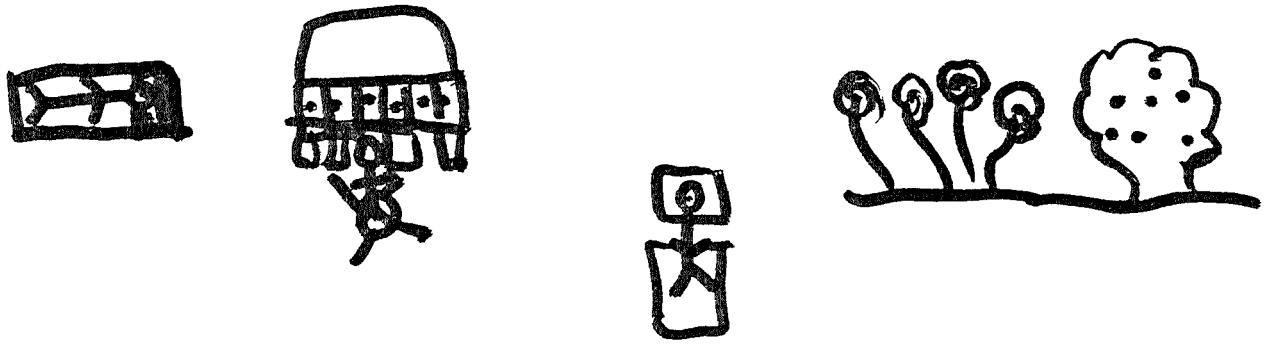

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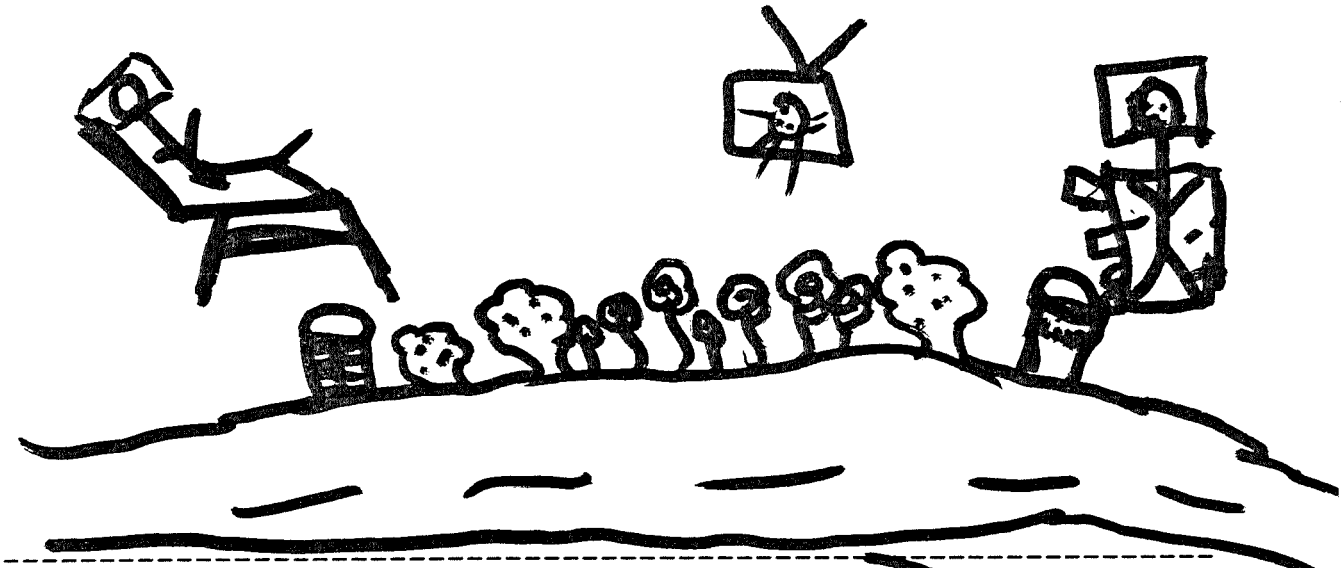

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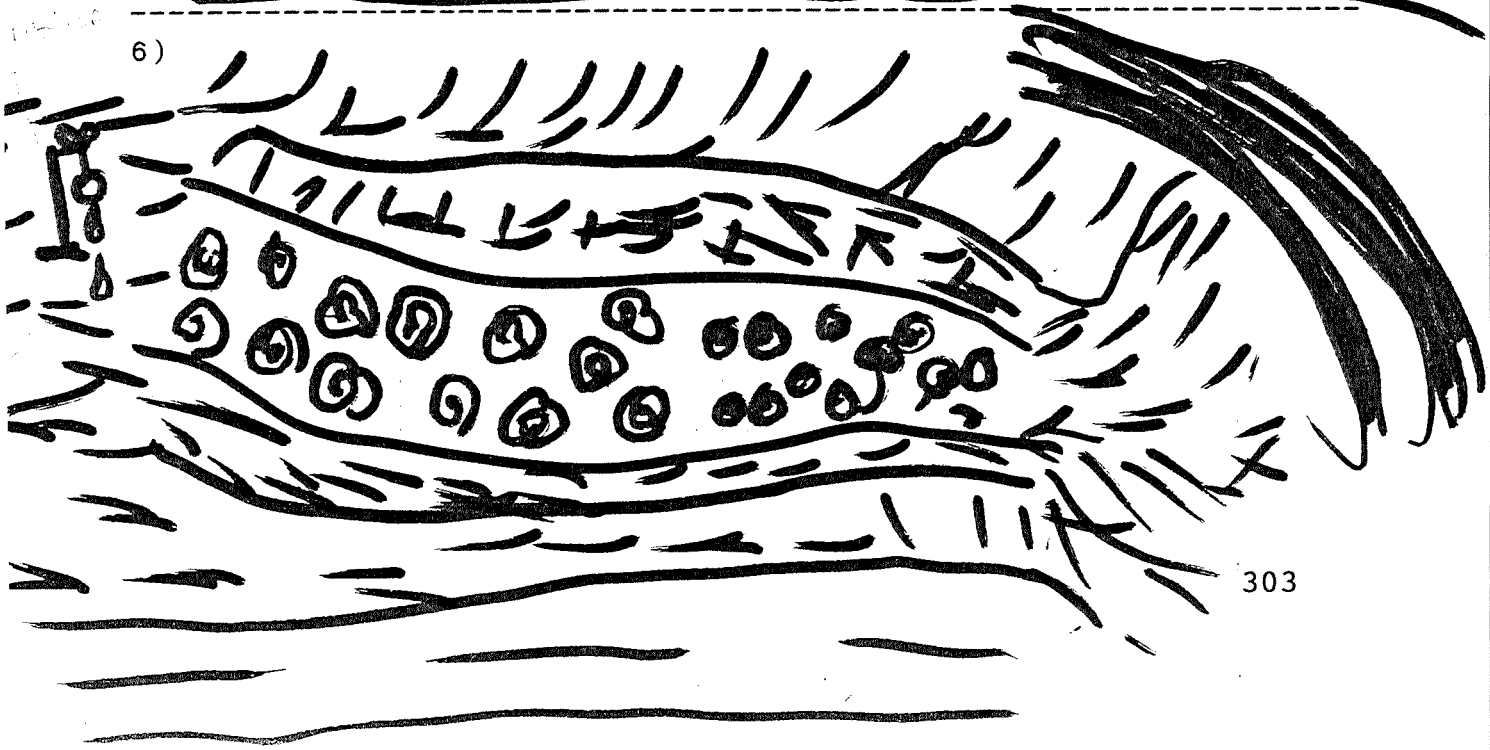

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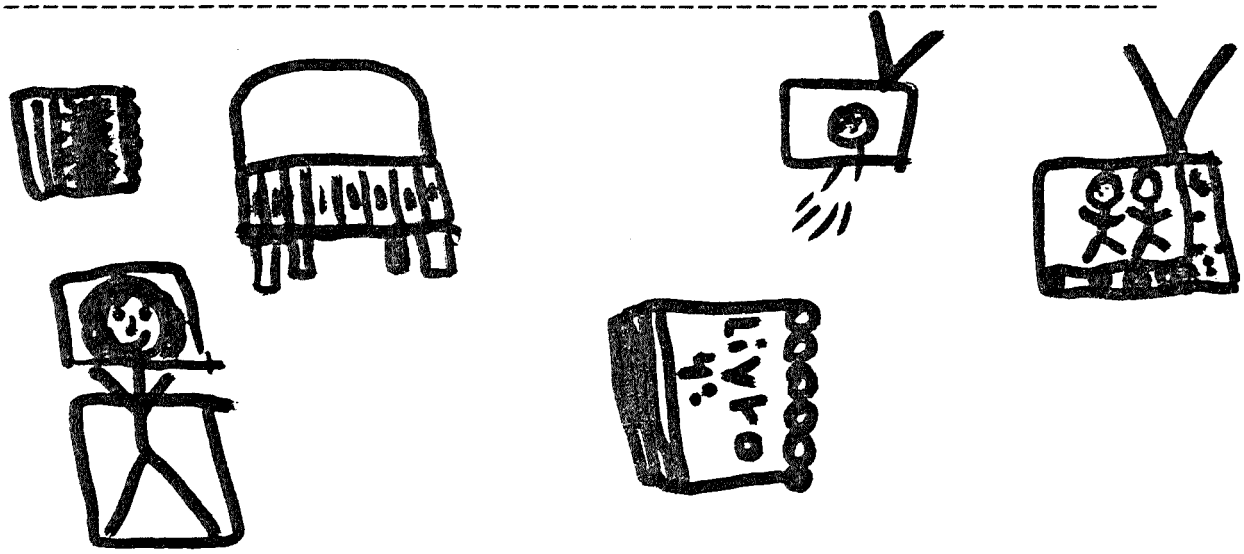

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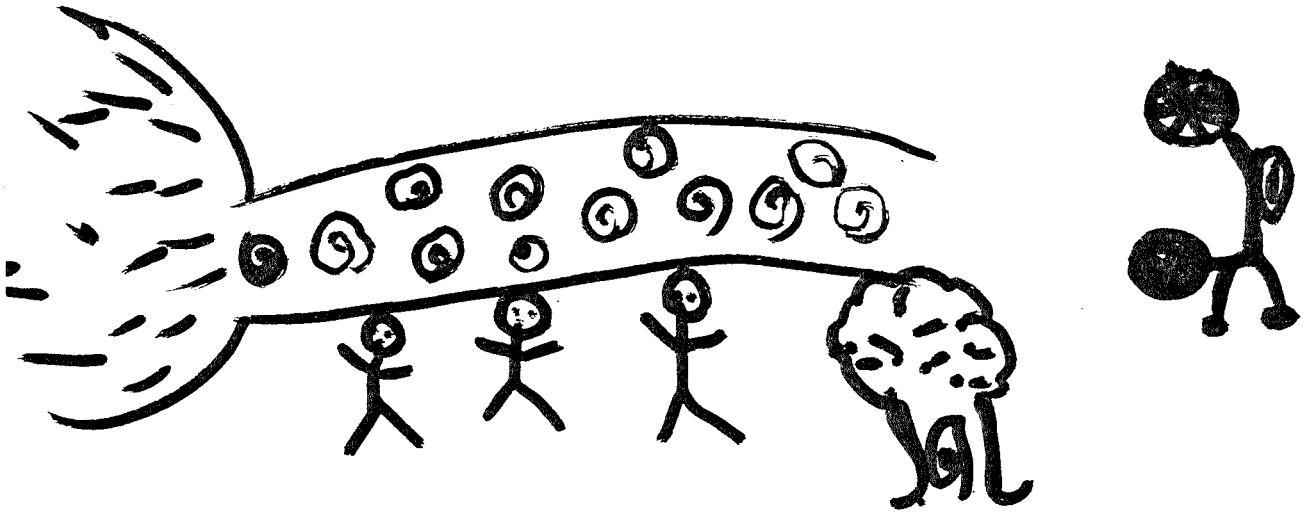

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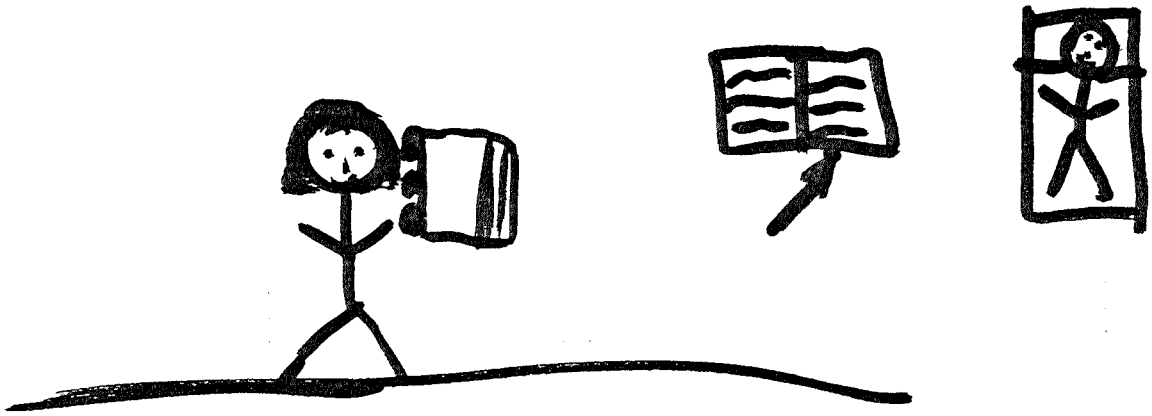
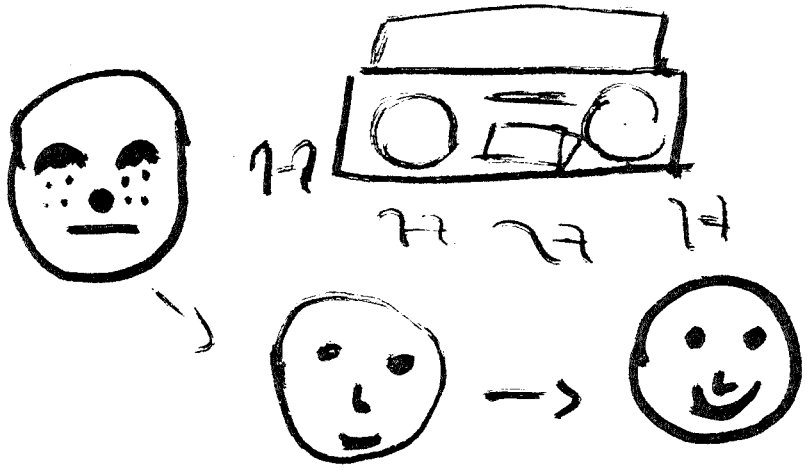


NAME: CLAUDIA C.31 AGE: 12

SET 1

1)



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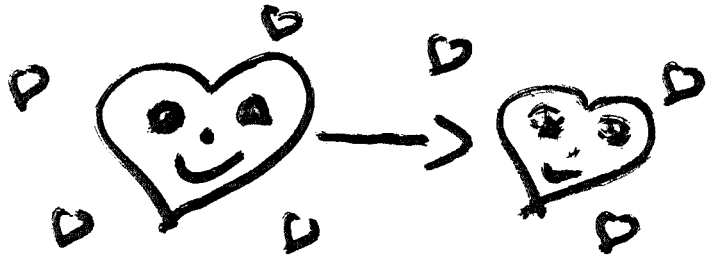

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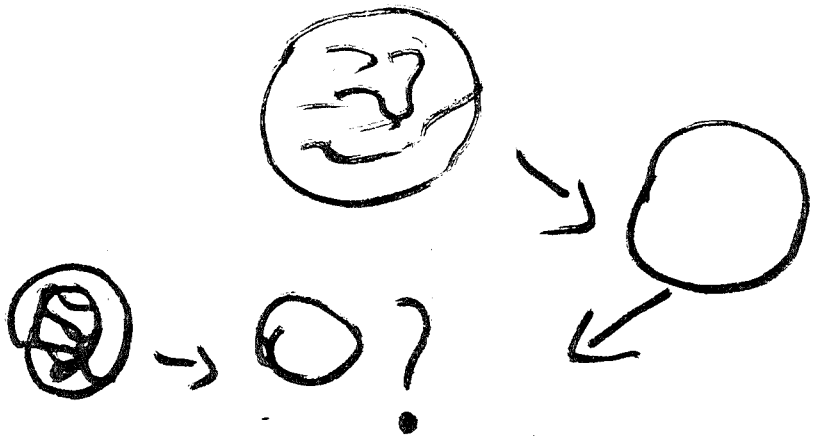
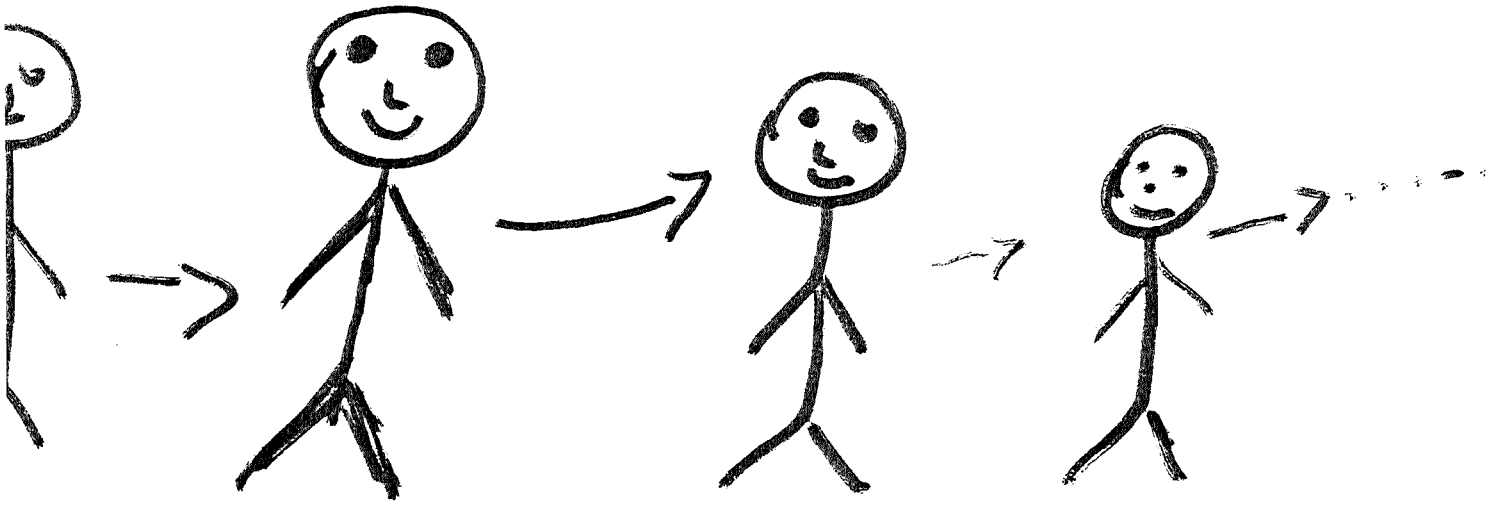


NAME: GLAUCIA C-31 AGE: 12

SET 2

4)



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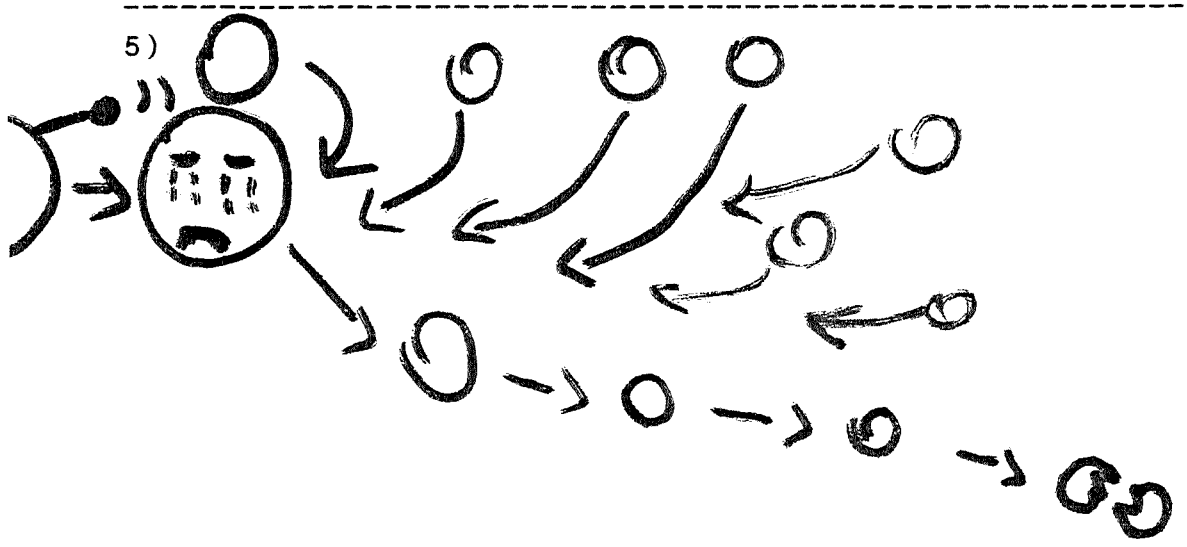

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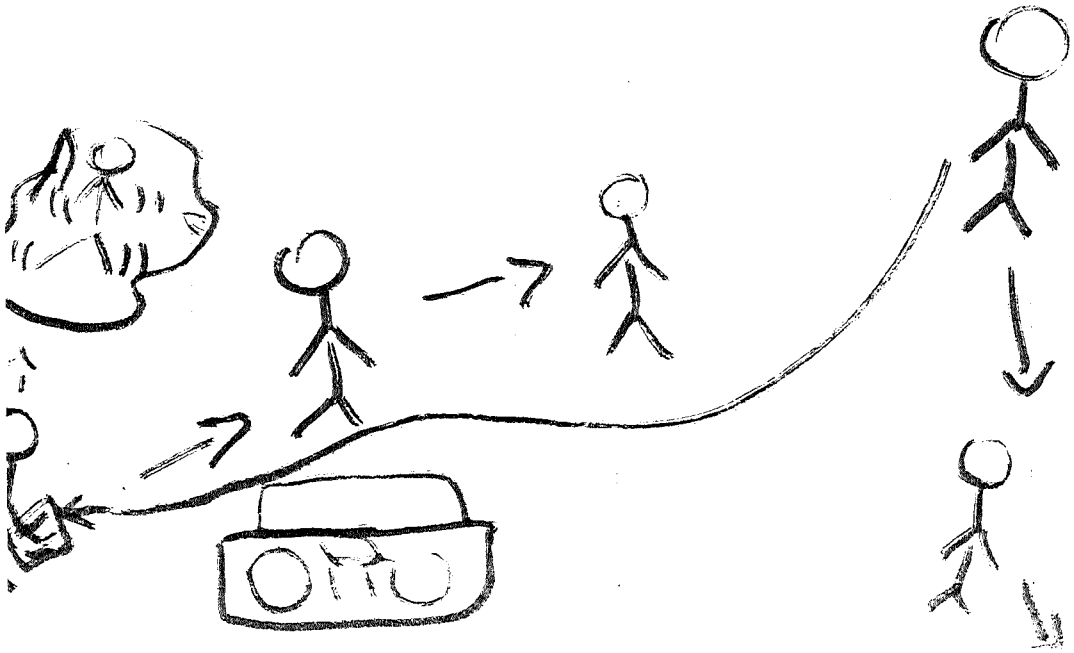

APPENDIX 7

SAMPLE OF SEMI-STRUCTURED INTERVIEWS: BRAZILIAN DATA

CHILDREN 5 - 7:

1) STUDENT 3:

1) Someone playing the piano.

2) Someone playing a guitar.

3) Someone playing the drums.

4) A piano is playing.

5) Reminds me of a conductor.

6) Like a flute playing.

7) A piano playing.

8) Someone conducting people playing various instruments.

9) It has a flute, piano and a guitar in it.

2) **STUDENT 6:**

1) The music seems to go up and down.

2) More agitated than the first one.
A boy dancing and enjoying the music.

3) Slow music.
Sleeping music.

4) Goes up and down.

5) Slow music, not agitated.

6) Piano.

7) Slow music.
It looks like a sad man.

8) Up and down in pitch.

9) Looks like a man wanting to sleep.

3) **STUDENT 9:**

1) Beautiful music.

2) Happy and beautiful music.

3) Music to dance.
Calm and resting.

4) Beautiful music and calm.

5) Calm music like the former one.

6) Calm, one feels like running freely.

7) Calm and resting.

8) I like the music.
Good music to run freely.

9) Happy music.
Beautiful.

4) <u>STUDENT 29:</u>

1) It is like a ball music where people are dancing.

2) Beautiful music.
I thought on my cat.

3) Beautiful music.

I thought on my sister and my cousin who live far away from me.

4) Beautiful music.
Reminds me of my aunt.

5) Reminds me of my cat that used to climb and suddenly my dad killed it.

6) It is like a wedding music with a lot of flowers.

7) Beautiful music.
I thought of my dog and chicken.

8) Beautiful music.

9) Nice music.

5) <u>STUDENT 30:</u>

1) I listened to the music.

2) Loud, rock.
It is beautiful.

3) The beat of the music sounded like a heart beat.
Beautiful.

4) Like samba, loud and fast.
Beautiful.

5) I thought that I would feel sad, if my grandparents would die.
Sad but beautiful.

6) Like a wedding music. When someone gets married they become happy.

7) In every music I try to know what is playing, but I can't identify it.
I thought about my happiness with my parents.

8) Very sad music. I thought of death. There is a sad man (figure cards) and the orange card looks like blood.

9) I thought on the instruments but I could not identify them.
Happy music. I thought of myself happy playing with my friends.

CHILDREN 9 - 10:

1) **STUDENT 39:**

1) Piano going up and down.
Like someone dancing. Music good to relax, or when one is depressed.

2) Guitar, drums. Continuous sound, and some soft ones.
Like a competition. A person feeling anxious to win.

The music makes me happy.

3) Like a love song. A beautiful music for the first love meeting.

4) Piano, starts slow. It has a different rhythm. It goes up and down.
Like a ball music, good for dancing.

5) Like a couple who meet and end up in love.

6) Very soft music, violin, classical music.
There is a prince who meets a princess and he invites her to dance.

7) Slow music. Reminds me of happy moments like christmas time. It touches my emotions.

8) Like someone chained in the tower, or someone who knows he is going to die.

9) If someone is sad, listens to this music and get a bright idea and becomes happy.

2) **STUDENT 37:**

1) Piano. Like a ballerina dancing for the first time. Calm music.

2) Many instruments playing, piano, guitar.
Someone dancing and relaxing.

3) Many instruments.
Someone thinking of a sad thing while listening to the music.

4) A dancer who remembered things from her childhood.

5) Violin.
Someone singing on stage for the first time with a lot of people watching him.

6) Violin, piano.
Many dancers on stage.

7) Piano.
A man from Australia performing in Brazil for the first time.

8) Like a wedding music. A bride and groom entering in the church.

9) Violin.
Like a show where people are dancing.

3) **STUDENT 20:**

1) Dancing music. Like a folk music.

2) Piano. Like a person riding a balloon.

3) Flute. Someone lying down and looking to the nature.
A person dancing. Romantic music.

4) Piano.
Group of people dancing. Ballet music.

5) Organ, piano.
Like a person crying at a funeral.

6) Piano and flute.
People dancing a folk music.

7) Piano.
Like someone sitting and attending school.

8) Piano.

People dancing. Children studying.

9) Like a person studying piano. Romantic music.

My dad likes this music.

4) <u>STUDENT 11:</u>

1) Piano music. Interesting music. Sad.

2) I paid attention to the instruments but I did not recognise them.

Happy music. Calm.

3) Drums. Like a trombone playing.

Sad, but at the same time happy.

4) Piano.

Calm music to listen when one is nervous.

5) I don't know the instruments.

Sad music.

6) Only instrumental music. Violin. I like this kind of music.

7) Piano music. Goes forte and piano.

This is the ideal music for someone who likes opera.
Calm.

8) Almost everything played by violins.
Happy music. Opera music.

9) Violin, not sung music.
Much happier.

5) **STUDENT 10:**

1) I like this music. Ballet music.

2) Only instrumental music.
Like a gym music.

3) It is a sad music.

4) Only instrumental music, violin and piano.
Ballet music.

5) It is a very happy music.

6) Flute and violin music.
It is a sad music but beautiful.

7) Piano and violin.

Happy music.

8) Piano, violin and flute.
Ballet music, beautiful and happy.

9) Piano, flute and violin.
Beautiful.

CHILDREN 12 - 13:

1) **STUDENT 45:**

1) Not too fast, piano.
This music reminds me an organ. Beautiful.

2) Rock music.
Good for dancing, beautiful and happy.

3) Slow. More than one instrument.
Like my sister's wedding music. Same rhythm.

4) Piano, rock.
Like a wood-packer music, played by and advanced student.

5) I don't know the name of the instruments.
Like a graduation music. Not so happy. Calm.

6) March. Drums and three other instruments.
Like a music especially prepared for a presidential reception.

7) Piano.
A ball music. Neutral music.

8) Violin.
It is not a happy music. Reminds me of someone who is ill.

9) Violin, fast.
Happy music. This music does not refer to any situation or occasion. It is like a recital music.

2) **STUDENT 33:**

1) I thought of myself dancing ballet. A very good music to rest.

2) I always think on the way the music is played, eg., fast, slow.
I listen a lot of this kind of music. Calm. Show music.

3) Much slower than the other two.
It is a good music to listen when you want to sleep.

4) A good music to think about life.
A person dancing, starting slower and getting faster.

5) A good music to relax and have a nap. I think of myself dancing ballet.

6) Slow music.
It is a very good music to listen.

7) Piano.
A sad person listening to the music and becoming happy.

8) Faster music.
It is a music for a happy person who likes to listen music.

9) Starts slow and gets faster.
People dancing.

3) **STUDENT 43:**

1) Piano.
Looks like something in movement. Let us free.

2) Piano.

Like someone winning a competition. Let us free.

Happy music.

3) Slow, calm.

Resting music. It lets us recover our strength.

4) Piano.

An animated music. Like someone dancing.

5) Violin.

This music does not let us happy. One does not think about good things. Sad music.

6) Violin, Piano. Calm and relaxing music.

7) Fast music, Piano. Happy music.

8) Like someone that is investigating a mystery. Scared person.

9) Fast. Violin.

The music can make you happy if you are sad.

4) <u>STUDENT 34:</u>

1) Piano. it has a melody.

2) Other instruments. Faster than the first.
Helped me remind things I lived.

3) Reminded me of not so good things I lived.

4) It is like a couple dancing fast.

5) Starts quiet and increasing the volume.
Classical music. Beautiful.

6) Slow and fast.
Very different sound.

7) Fast and slow. Different melodies.
I remembered things that I did in the past. Good to listen.

8) Like a TV programme that I watched once. Very beautiful.

9) Alternates between fast and slow.
I remembered about things that I usually don't remember.

5) **STUDENT 13:**

1) I never heard this music before. Piano.

Classical music.

2) Organ. Rock music. Agitated music.

3) Ballet music. Not agitated.

4) Piano. Same rhythm than the first.
Quiet and resting music.

5) Like Jazz music. Restful.

6) Played with more than one instrument.
The calmest music so far.

7) Played different notes. Sometimes it goes more quietly.
Like a valse. Resting.

8) Strong rhythm and loud. Played with more than one instrument.
Agitated like a party music.

9) Violin. Neither strong, nor soft. Agitated.

APPENDIX 8

SEMI-STRUCTURED INTERVIEW SAMPLES CLASSIFIED BY THE SPIRAL STAGES - BRAZILIAN DATA

RESPONSES TO MUSICAL EXTRACTS CLASSIFIED UNDER THE MATERIALS STAGE

1) Someone playing the piano.

2) Someone playing a guitar.

3) Like a flute playing.

4) It has a flute, piano and a guitar in it.

5) Up and down in pitch.

6) I listened to the music.

7) Only instrumental music. Violin. I like this kind of music.

8) Not too fast. Piano.
This music reminds me an organ. Beautiful music.

9) Piano. It has a melody.

10) Slow and fast.

Very different sound.

RESPONSES TO MUSICAL EXTRACTS CLASSIFIED UNDER THE EXPRESSION STAGE (NON-CUMULATIVE)

1) Happy music. Beautiful.

2) It is like a ball music where people are dancing.

3) In every music I try to know what is playing, but I can't identify it.

I thought about my happiness with my parents.

4) Very sad music. I thought of death. There is a sad man (figure cards) and the orange card looks like blood.

5) I thought on the instruments but I could not identify them.

Happy music. I thought of myself happy playing with my friends.

6) Guitar, drums. Continuous sound, and some soft ones. Like a competition. A person feeling anxious to win.

The music makes me happy.

7) Slow music. It reminds me of happy moments like christmas time. It touches my emotions.

8) Piano. Like a ballerina dancing for the first time. Calm music.

9) Many instruments playing, piano, guitar. Someone dancing and relaxing.

10) Drums. Like a trombone playing. Sad, but at the same time happy.

NOTE: There were no responses made in terms of FORM.

APPENDIX 9

SWANWICK'S SPIRAL CRITERIA FOR LISTENING

SENSORY: The student recognizes clear difference of loudness level; widely different pitch differences; obvious changes of tone colour and texture. None of these is technically analyzed and there is no account of expressive character or structural relationships.

MANIPULATIVE: The student identifies, but does not analyze, devices to do with the management of musical material: for example, trills; *tremolos*; scalic patterns; *glissandi*; steady or fluctuating beat; spatial and stereophonic effects; like and unlike instrumental sounds.

PERSONAL EXPRESSIVENESS: The student describes the general atmosphere, mood or character of a passage and recognizes changes of expressive level, without drawing attention to structural relationships. Descriptions of the music may be in terms of dramatic incident, stories, personal associations and visual images, or feeling qualities.

VERNACULAR: The student recognizes common musical procedures and may identify such elements as metre, phrase shape and length, repetitions, syncopation,

sequences, drones, *ostinati*. There is some technical analysis.

SPECULATIVE: The student identifies what is unusual or unexpected within the context of a particular work and is able to draw attention to changes in character by reference to instrumental or vocal colour, pitch, speech, loudness, rhythm and phrase length; the magnitude and frequency of changes, the extent to which changes are gradual or sudden.

IDIOMATIC: The student places music within a stylistic context and shows awareness of technical devices and the structural procedures that characterises a particular idiom; such as transformation by variation, decoration and contrasting middle sections, distinctive harmonies and rhythm inflections, specific instrumental sound production or vocal *melisma*.

SYMBOLIC: In addition to meeting the criteria for the other grades, the student displays evidence of personal exploration and commitment through an account of a chosen area of musical investigation. There will be evidence of individual insights and sustained engagement with particular works, performers or composers.

APPENDIX 10

MATRIX TO CLASSIFY SEMI-STRUCTURED INTERVIEW DATA

STUD	EXTRAC STAGE	1	2	3	4	5	6	7	8	9
1	M									
	E									
	F									
2	M									
	E									
	F									
3	M									
	E									
	F									
4	M									
	E									
	F									
5	M									
	E									
	F									
6	M									
	E									
	F									
7	M									
	E									
	F									
8	M									
	E									
	F									

cont...

cont...

STUD	EXTRAC STAGE	1	2	3	4	5	6	7	8	9
9	M									
	E									
	F									
10	M									
	E									
	F									
11	M									
	E									
	F									
12	M									
	E									
	F									
13	M									
	E									
	F									
14	M									
	E									
	F									
15	M									
	E									
	F									
16	M									
	E									
	F									

cont...

cont...

STUD	EXTRAC STAGE	1	2	3	4	5	6	7	8	9
17	M									
	E									
	F									
18	M									
	E									
	F									
19	M									
	E									
	F									
20	M									
	E									
	F									

APPENDIX 11

NUMERICAL TABLE: SEMI-STRUCTURED INTERVIEW - BRAZILIAN STUDY

STUDENTS	MATERIALS	EXPRESSION	FORM
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			

LIST OF EXTRACTS - FIELD WORK IN ENGLAND

SET 1:

MATERIAL:

Rea, Chris - "Hired Gun"

1985 - Magnet Records LTD, No. 2292-42 374-2

CD: 001-024

TAPE: 002-011 / 012-020

EXPRESSIVE CHARACTER:

Warwick, D. - "Heartbreaker"

1989 - CBS United Kingdom LTD, No. MOOD CD6

CD: 001-026

TAPE: 022-029 / 030-037

FORM:

Collins, P. - "That's Just the Way it is"

1989 - Virgin Records LTD, No. CDV 2620

CD: 001-028

TAPE: 038-048 / 049-060

SET 2:

MATERIAL:

Chopin, F. - "Waltz No.1 in E flat Major, op.18"

Jean-Marc Luisada, Piano

1989 - Delta Music, No. 15 604

CD: 001-026

TAPE: 087-095 / 096-104

EXPRESSIVE CHARACTER:

Dvorak - "Serenade for Strings in E, op. 22" (1st movement, Moderato)

Scottish Chamber Orchestra

Innovative Music Productions LTD, No. PCD 928

CD: 001-037

TAPE: 105-116 / 117-128

FORM:

Haydn - "Symphonie in D, No. 101 'Clock'"

Wiener Symphoniker

1989 Philips Classics Production, No. 422 973-2

CD: 001-028

TAPE: 129-137 / 138-146

SET 3:

MATERIAL:

Debussy, C. - "Suite Bergamasque", Passepied (4th movement)

Tamas Varsay, Piano

1970 - Polidor International, No. 429 517-2

CD: 001-035

TAPE: 174-183 / 184-192

EXPRESSIVE CHARACTER:

Elgar - "Introduction and Allegro, op. 47"

String Quartet, Academy of St Martin-in-the-Fields

1989 - The Decca Record Company LTD, No. 421 384-2

CD: 001-024

TAPE: 193-199 / 200-205

FORM:

Mendelssohn, F. - "Octet in E flat Major, op. 20" (4th movement, Presto)

Music Fest Ensemble

Innovative Music Production, LTD, No. PCD 960

CD: 001-024

TAPE: 206-213 / 214-221

REPERTORY GRID TECHNIQUE: ONE WORD RATIONALE

YEAR 2

1) MATERIALS:

* instruments	* slow	* loud
* quickest	* sound goes up	* fast
* piano	* piano	* slower
* faster	* running	* softer
* drums	* diff. start	* down
* rock	* high	* faster
* double bass	* 1 instrument	* piano
* piano	* piano	* more noise
* different	* fast	* piano
* piano	* High	* louder
* loud	* pop	* piano
* slow	* slowest	* faster
* piano	* faster	* loud

2) EXPRESSION:

* relaxing	* happy	* agitated
* train	* calm	* calm
* sad	* happy	* active
* sad	* sad	* sleeping
* calm	* sad	* sad
* sad	* sad	* active

3) FORM:

FINAL RESULTS:
M = 39
E = 18
F = 0
NO ANSWERS = 3

YEAR 6

1) **MATERIALS:**

* piano	* piano	* piano
* fast	* fast	* Quick
* fast	* not as loud	* louder
* piano	* piano	* faster
* slowest	* faster	* piano
* dif. instrum.	* faster	* piano
* rock	* piano	* violin
* louder	* faster	* moderate
* soft		

2) **EXPRESSION:**

* active	* active	* dramatic
* exciting	* sad	* sad
* lively	* active	* relaxing
* sad	* sad	* active
* relaxing	* not as happy	* dramatic
* sad	* sad	* relaxing
* agitated	* agitated	* peaceful
* active	* sad	* sad
* active	* dramatic	* active
* active	* active	* harsh
* sad	* passive	* agitated

3) **FORM:**

* Changes more than the 1st and 2nd ones.

FINAL RESULTS:

M = 25

E = 33

F = 1

NO ANSWER = 1

YEAR 9

1) MATERIALS:

* faster	* faster	* piano
* long notes	* tempo and beat	* piano
* quicker	* piano	* piano
* piano	* Slower	* Slower
* faster	* slower	* piano
* piano	* piano	* piano
* Not fast	* piano	

3) EXPRESSION:

* active	* active	* dark
* active	* active	* active
* lively	* jumpy	* harsh
* Happier	* creative	* angry
* change mood	* unhappy	* active
* active	* active	* dramatic
* dramatic	* active	* active
* dramatic	* happy	* lively
* dramatic	* energetic	* powerful
* powerful	* lively	* happier
* lively	* active	* heavy
* active	* lively	* strong

3) FORM:

* Steady beat adding a melody - superimposing.
* Shape of the melody.
* changes of tempo, no questions and answers.
* more depth in tone, more lower notes.

FINAL RESULTS:

M = 20

E = 36

F = 4

SAMPLE OF SEMI-STRUCTURED INTERVIEWS - ENGLISH DATA

YEAR 2:

1) STUDENT 10:

1) A guitar, a piano.
I like the music.

2) Trumpet, drums and piano.

3) Drums, and I do not know the other instruments.
Nice music.
Sad.

4) Piano, and a violin as well.
The piano and the violin are different because they do not seem to have the same tune.

5) Violin and a harp and they have a different tune.
The violin has something to rub (bow).
Nice tune, they did not sound the same.

6) A violin again in a different tune.
They have different colours because they do not make the same tune.

7) A piano was making a different tune.
There was this thing making da, da, da.
Fast.

8) Scaring music.
Piano and the trumpet make scary music.

9) Violin and trumpet.
Very fast.

2) **STUDENT 11:**

1) Quiet song.
Sad song.
Nice music.

2) Noise music.
When you work you would like to put this music on, because when my dad goes in the car he does not like to have sad music.

3) In the beginning of it, it had drums, and they did not continue.
It was not a horrible music.

4) When you go to a ball you might have this music for dancing.

Ballet dancing.

Person playing the piano.

The choice of the card was because it looks like someone dancing.

5) Someone is playing the violin.

Nice music.

If you are on your own you might listen to this music.

6) It is a quiet music, nice to listen to.

Someone was playing the violin, playing gently.

7) Someone was playing the piano.

Very fast music.

Nice music and quiet.

8) Someone was playing the violin very fast.

9) Someone was playing the violin.

Fast music.

It is like someone running in the woods, because it was fast music.

The choice of the card was because it was someone dancing.

3) **STUDENT 12:**

1) It was played by a piano.

Slow.

The choice of the card was like someone going to sleep.

2) Faster.

Running music.

3) Fast.

Loud.

Some clappers playing.

4) Fast.

Sounds like jumping, because it sounds like going up and down.

5) Slow.

Sad.

6) Slow.

Violin playing.

7) Fast.

Running.

A piano playing.

8) Is a horn playing.

Sounds happy.

Slow.

9) Slow.

Violin playing.

High music, it is not quite deep.

4) <u>STUDENT 16:</u>

1) A piano playing.

Sad music.

2) Drums.

Someone is running.

Loud.

3) Different tone.

4) Nice tune.

Piano.

5) Violin.

Loud.

6) Played by a violin.

Loud.

Nice tune.

7) Played by a piano

Loud.

Sad.

Nice tune.

8) Quite high.

Violin.

Loud.

9) Violin.

Nice tune.

Loud.

5) **STUDENT 60:**

1) Piano.

Nice music.

2) Kind of fast.

Ballet music.

3) A pop start would sing this.

It was a drum.

4) It is the kind of music people would like to listen to.

Kind of relaxing music.

5) Played by violin.
People would like to dance to.

6) It is high music.
Strange sort of music.

7) It is fast.

8) It is very loud, and kind of resting.

9) Fast music.

YEAR 6:

1) **STUDENT 19:**

1) Was sad, like someone had died.
It repeated itself.
Slow moving.

2) Happy and very bouncy, one could dance to it.
It repeated itself like the other one, but in different way, sometimes it was high and sometimes it was low.
Nice to listen to.

3) Slow beat, it was nice to listen to.

It also repeated itself, different instruments were added as it went.
Electric guitar and drums.
Sad, relaxing.

4) It was like classical ball music.
Because it mainly the piano, it sounded bouncy because sometimes it went high and then low again, and sometimes it went loud.
It is nice to sit down and listen to it.
It sounded happy.

5) Sounded like dancing but not happy.
If you play the violin very slow it does not sound a happy music.
Nice to listen to.

6) Like dancing quite fast.

7) Sometimes the piano went high and quite loud.
Not good to dance, nice to listen to

8) Quite sad, sometimes quite sad, sounded dramatic because the violin and the piano were playing together.
The violin did high notes and loud.
Nice to listen to.

9) Sounded happier because it has a base made by the cellos, and the violins went high. They played different melodies, because the cellos played quite low the violins played high notes.
It sounded like someone was being chased.

2) **STUDENT 43:**

1) Sounded quite slow and sad. A very tired person.
Very slow, played by the piano.

2) Quite fast and lively. Sound like music you would do exercises. Quite exiting music. You could listen to it without getting bored.
Different instruments.

3) Very relaxing, very slow. Had a very strong rhythm, took quite a long time, just with the drums before the tune came in.
Quiet.

4) Happy sounded, fast. Sounded like a (mass) could be running over the keys.
Some of it was in scales, going up.

5) Sometimes it sounded more cheerful, and sometimes it sounded less cheerful, it was more sad, because it

is slow in some parts. The way the instruments played made it sound quite sad.

6) Cheerful, played by the violin. Sounded like someone jumping around. Someone exiting about something.

7) Quite quick. Like someone rushing around, trying to get somewhere, getting late.
Played by the piano. Sounded quite exiting.

8) Very dramatic, because the way the violins are playing quite loud. Fairly fast.

9) Quite quick, played by the violin, exciting.

3) **STUDENT 53:**

1) It is relaxing and it sounds nice.
Nice slow moving music and it is very relaxing, because it is slow and soft, and the right key makes it.
It had the right movement in it. Where the music got louder, it was in the right place.

2) It got very fast movement to it. Nice music.
The way it gets louder and softer makes it nice.
Quite loud and fast.

3) Very smooth, and the beat is nice. This sort of music is very nice, the beat, and the way it gets louder.
It is like the first one, quite relaxing, because it is smooth, and the notes are nice.

4) It got a lot of action in it, jumpy, lots of movement. The notes and the beat jump in the music. It was not harsh, it moved along.

5) Very smooth and relaxing. The way they have chosen the instrument they play, the violin, that was good. You can tell by the way they move their fingers, makes it sound nice.
You can sit down and listen to that music, and perhaps fall asleep.

6) It is very relaxing and smooth, and again the instruments are right. If you sat in a seat you probably fell asleep. It gets louder in the right places and the beat is right.

7) It is harsh and very hard one the notes. They really bang. It is like they are pounding. It has not got any relaxation to it. It is just harsh.

8) It is harsh. it sounds as if something had just happened, somebody that did not want something to

happen, and they are making it really loud, something really bad happened. It is like a sad music in a different way.
You can get music that is really slow like a relaxation but in the way that the music has been made, it is supposed to be sad, but you can also get sad if you have really pounding music.

9) It sounds like someone running, because every time they put their feet down their stamping, and the music sound as something really pounding. Very fast, and it got really loud in some places than it got really soft in some places.

4) <u>STUDENT 54:</u>

1) It is soothing, flows into it.
Soft sort of music, relaxing, because of the way the piano was playing up and down.

2) Very danceable music. It got a rhythm to it.
Disco, dancing type of music.

3) Very mystical, builds into each other, mysterious, the way the synthesizer was playing, and the drum beats, that sounded mysterious.

4) Fast and a sort of furious. Jumping all over the place playing different notes going up and down. Jumped up the piano, then it stopped and then jumped again.

5) It is quite relaxing, but not a kind of music that makes you sleep. Makes you want to relax, put your head back and listen to it. Because it goes like that (he sung the tune), a long way down on the piano. Goes very smoothly.

6) It is not exactly jumpy, sort of jumpy, sort of relaxing, and makes you feel happy.
Because of the instruments the way they played, they went down. The background makes 'pum', 'pum', and makes you feel happy.

7) The piano goes like (he sung a part of it describing how fast and jumpy it is), not really happy, just makes you listen to it, it gets louder and quieter, and then it gets higher and low.
It is movable, the way it gets louder and softer and the up and down.

8) The way it goes (he sung again part of it), stopped again and jumped immediately. It goes high like that (he sung), and then it jumped back down. Jumpy. Jumps about with the violins.

9) It is strong and powerful, and it is really low, happy.
It is happy, because of the violins playing strongly.

5) **STUDENT 56:**

1) If you are tired and want to go to sleep.
Was not loud, it was soft. It is not a running music.

2) Make you want to run, the drum beat makes you want to run. It is not good to sleep with it.
Quite loud, was not gentle, or soft. It was a kind of rock.

3) It had a beat to it. It was soft, it was not too loud. Makes you want to fall asleep even though it had a beat to it. It is soft.
It was smooth, it did not moved up and down.

4) Happy, going up and down, you feel like smile. Not harsh but it was quite loud. It is quite smooth. You feel happy and smiling. Nice tune.

5) It is soft, half way through it gets a bit louder, but still makes you rest, peaceful, because it does

not have a beat. Peaceful which makes you tired, and wanting to sit down and listen to it. Not too loud, but it gets louder.

6) Happy, it is nice and makes you happy and jolly. It is not so running music. You can jog to it but not run. Makes you happy because it is bouncy. Good music to listen if you are sad. It makes you happy. Not loud, but soft.

7) There is a beat to the music which makes it loud and fats, but it slows down, then it moves up again and goes loud.
Had a beat, it was bouncy. it was not that quieter, but it was not that louder either.
Quick, you want to run to it, happy, because it is not that rough, it is quite smooth and it got a beat to it.

8) Makes you feel angry, as if something is going to happen, awful. Feels like something dangerous, because it gets louder and louder and the music sounds spooky, frightening. It got louder, and it does not make me feel asleep, it made me alert, as if something was going to happen.

9) Happy because of the quick beat. It makes me feel jumpy.

It was loud, flowing, it went up and down, bouncing. You could run to it, and it makes you feel happy.

YEAR 9:

1) **STUDENT 25:**

1) It was played by the piano, very relaxing. Chords were not playing at the same time - more staggered. The left hand playing the chords and the right hand bright.
The were some gaps in it, like the chords dying away, and than single notes coming, and going back to chords again.
Lazy afternoon, very relaxing.

2) There was a drum beat and the other sounds were from synthesizer fast. The melody went up and down, within an octave chord. Sounded a bit relaxing.

3) Phill Collins. He uses drums and keyboards. Starts off with percussion, and the guitars came in later on. Slow rock beat.
Relaxing tempo.

4) Played by piano. It was changing tempo, slow and fast. Right hand playing some chords and single

notes going up octave scales, and down. The left hand played chords roughly around the middle "C" mark.

5) Played by string orchestra. Violins played, basses answered, and this made a building up. All come together near the end. Set space for notes, like you take someone to the train station that is going to go away for a while. Sounds sad.

6) Was not that fast, and the violins had the major part. Started off by the horns and brass (I think), playing staccato notes to held the violins, which were going up and down the scales.
Lively beat, not all the instruments together, and the tempo is very slow.

7) Started off with the bass line playing staccato, and the right hand has the tune, changes tempo.
It is very light because of the staccato notes, kind of relaxing, not very speedy.

8) The bass started, and the first and second violins came in after a couple of bars, playing different notes, and there was a gap in the middle, and later kind of gather the pace slowly, and starting the way down.
Kind of music you get in old films, like someone

running.

9) Started off with the basses and cellos, maybe violins, and they were playing low notes and very fast (semiquavers), and the cellos come right up after couple of notes getting high in pitch, and the violins come in playing fast notes.
Sounds like music from classical movies when someone is going up marble steps.

2) **STUDENT 26:**

1) It seems that it is building up to something, like an introduction.
Quite peaceful, gentle, and not quite high hitting notes.
Piano, slow moving peace.

2) Fast music and it got a recognizable rhythm in it. It seems to be sporty, and could be associated with sports, because it is loud sounding and fast moving. Kind of music you listen in a sport programme. It uses a synthesizer.

3) Slow rhythm, not a background music. It does not sound British. It does not have a depth sound which is caused by instruments playing together, constant

sound.

Nice sounds played by chords.

4) It is gentle, but at the same time quick. High notes but most of them don't carry on for a long time. It does not leave gaps.

It was very repetitive, it got high and then down, and then high again.

It is a type of music similar to opera, that type of music played on stage. It is not a pop music, it is a classical one, because it is played by the piano.

5) It is string music. It is slow, then it gets faster and slows again. It is the type of music that the older generation listen to it, like my grandparents. It does not have modern instruments in it. It is not the same style as the pop music of the moment.

It flows very well, it doesn't stop and starts.

6) It flows but at the same time it jumps around, ordinary notes.

The violins got higher, and they had separate notes, repeated itself a bit in the style.

7) It rushes the way through as a pattern, sometimes getting slower and sometimes changing key. It goes that way through and the melody playing higher notes.

It jumped a bit up and down.

8) It seems to go well on black and white movies.
It went high and then it came low with the violins, strings. It repeated itself a bit but not too much.

9) Very fast moving music, and it is not particularly low notes short notes playing together. It repeats the same pattern. It was all strings.

3) **STUDENT 27:**

1) It is quite peaceful, and relaxing. You listen to it trying not to feel so sad.
Slow and quite regular, forceful downbeat.
It is catchy, you remember the tune after a while.

2) Sounds like energetic, a show music, like a Bee Gee song, american definitely, modern, maybe a lot of people dancing to it as a show.
Different instruments playing, keyboard and stuff like that. The way the beat and the song goes it sounds american.
It is catchy. You listen to it while you get dressed.

3) It is very relaxing piece of music, its starts good

bringing the chords in. It sounds continental, like the music British Airways plays in a long distant flight. Catchy
After the first chord more came in like something building up. The start showed like it was going to build up.

4) It moves quite fast, it was relaxing. I imagined someone trying to build a beat to it, conducting himself.
Ragtime, the way it had the first beat, and then after that it went a bit fast, and that picked up quite well.

5) It was soft when it started, and it sounded quite orchestral, like you go to a chamber concert and you listen to that. There was a build up from the soft to loud and then it was jumpy, and then it went back to the soft part again.
There was a bass instrument to start, maybe a bassoon, and then the soft ones building up. It was relaxing as well.

6) It was jumpy to start with, and the slow violins coming in was a quite significant move around the middle. The jumpy bass of the clarinet picks up the rhythm and the lead, which is quite good mix.
It was relaxing, and I had a vision of an

advertising of a car, a kind of family car (Audi).

7) Fast and jumpy again. It got louder and softer quite regularly, many times. Sounded European, maybe Mozart.
The fast beat was quite significant and the chords as well.
Country sunny day going in the car (image), relaxing, peaceful.

8) The way the bass started in the high made it sound dramatic, like someone was desperately trying to run away from something. I could imagine an opera someone running away making it sound very dramatic, because of the loud and the quiet differences, and the speed (tempo) that make it sound like that.
The loudness the way it goes loud and quiet, the speed that went for a long period of time and then fast and high notes which added to the dramaticism.

9) Started off dramatic, as it was going to follow the no. 8 piece, but it turned up to be a jolly song, a bit jumpy and fast.
The high notes and the significant basses to begin with, the bass doing jumpy rhythm and the high notes doing the tune. The cellos were doing the jumpy notes.
It is like a day on the river, and the way it turns

into a jolly song, not dramatic or sad, quite happy and peaceful.

4) <u>STUDENT 31:</u>

1) Quite slow, deep, mysterious, because of the speed. It had small chords, and a melody running over the top.
Nice and peaceful music, the notes were long and held a lot.

2) It was very rhythmic played by drums, it had 2 main beat going on, medium speed, a kind of dancing music.
High notes, not so much of a tune.

3) It had a strong continuous rhythm which continued and repeated, and it was after two bars another tune came up and it sounded quite sad and sleepy, and very slow.
Four beats, low notes and in the middle it had quite different kind of percussion rhythm and had high notes.
Quite moving, and a kind of music that expresses your feelings.

4) It is fast and happy, and sounds like someone

running. It was played on the piano. First it had some very quick notes, fast, and then the bass was playing one tune and the upper part another one, and there where not any chords, jumpy tunes. It was not too low or too high, the tune was quite close together.

Starts like phrases, first very quiet and then very loud, and then died down again.

5) Was a medium speed, because there were a lot of long notes, made it sound slower. Started off with the string instruments, playing low beats (3), then a higher instrument joint in with the main tune, and a cello and double bass doing the lower part, like an echo. As the tune went on it got louder, and more instruments joint in, and at the end they died away. It was played in a major key. Sounded like an old dance, and I think there were 4 beats in the bar.

6) It was quite slow, 2 beats in a bar, and started with a low instrument which played in it, and carried on through the whole piece, playing 2 beats, which were not the same notes, quite jumpy. On the top of this there were high string instruments, playing the main tune, and they were very smooth, and there are quite a few running bits, and the notes were slowish. The whole tune is quite quiet, and it sounded like a very slow water running. Quite

sleepy and peaceful.

7) Very fast, played on the piano. Started with the lower part, jumping around, playing quite rhythmic notes in the beginning. Then the higher part joint in and they were both very jumping around a lot. The higher part had sometimes small chords, or two notes playing at once, and it got louder about twice in the piece, but very loud and fast pushing upwards, and then it died down, and it got faster again. At the end it got slightly slower.

8) Very dramatic, very loud and low beat chords and there were strings playing over the top, and playing very down the scale (minor scale). It started very high and shrilled, all very loud and then they went down, then there was a short gap, and then they carried on going down lower. Then they started again on a different key and then higher and went down all chords, and it was quite slow and very dramatic.

9) Very fast, and there was a deep cello and bass playing very low notes at the beginning, and very fast, few notes up and down the scale, and got louder until it reached very high notes when the violin and high strings joint in, and they played the same sort of tune, very fast. It stayed like that, and then it was getting louder.

5) **STUDENT 39:**

1) Peaceful, nice music. It is a bit sad, not happy music.
Piano. It repeats itself a bit, in some parts. It goes over and over again. At the end it started to get a bit louder. Starts off soft, and gets louder and quicker.

2) Pop, it has a pop drum beat at the background. It keeps you awake.
Did not repeat itself. Sounded like something you could use at the beginning of a television programme.

3) Like a love song. Starts off with a drum beat, more tunes entering to it, and it gets a bit softer. It is nice, how it builds into more tunes, but the same drum beat is always there.
There are some changes from a steady thing and adding up with the synthesizer. You can hear the synthesizer kind of bending at places, some of the tunes loud and some of them soft.

4) It started off like a western film, and then it got faster, and then slightly slow again, changed around.

This music could be used as a background while people were talking.
Piano, some parts playing high notes and others low notes. They tried to emphasize low notes making it louder.

5) Orchestral piece, like violins in it. Quite peaceful, like an opera, where something goes good, and someone replying with a soft voice. Like someone was angry, and the other one trying to be nice. Perhaps a ballet music.
Loud, and they all banded in. There was not anything stuck out, except when it got louder. The soft bits were done by the violins.

6) Violins mainly. There was a kind of 'bam bam', and then it stopped at a stage, and then it came up again when the violins started up. At the end they were playing different tunes.
Peaceful, the violins standing out. There was a 'bam, bam' on the background, and the violins on the top.

7) Lively piece of music with the piano. It starts with the high notes, low notes that become louder, and are built in. It gets loud all of a sudden.
I don't know if I would listen this music very often. I might get bored with the way you can

predict when it gets loud and soft, and so on.

8) It is very loud music, played by the violins and basses. It sounds like a film music, where some tragedy just happened, like someone got killed, someone has been left, and all where very unhappy, sad.
It is very sudden, and loud.

9) Very fast music. Reminds me of Chaplin's film where someone is being chased, in the beginning. Then the violin music comes in which makes it sound nicer and softer. But while the violin goes on there is still a steady beat on the background.
The quickness did not have a lot of variation. It was a kind of steady quickness.

SEMI-STRUCTURED INTERVIEW SAMPLES CLASSIFIED BY THE SPIRAL STAGES - ENGLISH DATA

RESPONSES TO MUSICAL EXTRACTS CLASSIFIED UNDER THE MATERIALS STAGE

1) A piano and a guitar.

2) No one is singing.

3) It was a special drum.

4) Quite intelligent, lots of people can hear it if they like it.
Piano and violin playing.

5) It is alright.
Reminds you of something.
It got a rhythm.
It is going down.

6) A guitar and a piano.
I like the music.

7) Violin and trumpet.
Very fast.

8) Someone was playing the piano.
Very fast music.
Nice music and quiet.

9) Slow.
Violin playing.
High music, it is not quite deep.

10) A pop star would sing this.
It had a drum in it.

RESPONSES TO MUSICAL EXTRACTS CLASSIFIED UNDER THE EXPRESSION STAGE (NON-CUMULATIVE)

1) Quite racking and 'scary' notes.
Bits in between.
Lots of shaky things, blowing instruments, drums.

2) It is like a battle, like weapon clashing together.
All sorts of instruments were playing, a violin.

3) It is quite good, it got a nice rhythm.
Sort of rock and sort of sad, because one bit is like someone is dancing and the other bit is

sort of good.

4) Sounds like someone has been born.
It is not sad.
Lots of instruments.
Sounds like 'tet', 'tet', tet'.

5) It was played by a piano.
First it goes up, then it goes down, and up and down, up and down.
It is good to listen to.

6) In the beginning of it, it had drums, and they did not continue.
It was not a horrible music.

7) When you go to a ball you might have this music for dancing.
Ballet dancing.
Person playing the piano.

8) It is slow.
It is quiet and happy.
The main instrument is viola, but there was also some tapping as the viola went on.

9) Sort of a rocky music, guitars, and electric instruments. Pop star music.

It is not like sweet music, it is more noise. Lots of people playing guitar in it, probably a lot of people would like to dance to it. Nice music to listen to.

10) If you were an old man and would like to sit down in day time and read, you could listen to the music very calm. It is not a music that would frightening you. It is more a gentle music.
Sounds like butterfly. Quite nice music to listen to.
Very slow music, very gentle, easy to relax. Played by a violin.

11) The music is like someone was playing the drums and the violin loudly, and then the piano join in very loud.
It is like dancing music. Sweet music.

12) It is sort of quick music, like someone playing the piano very quickly, and it is sort of dancing music.
It is nobody singing. Like someone having a party.

13) One could dance to it.
It is not classical, like 'jazzy'.

It was not calm, it was loud.
Someone trying to run away from somebody else.

14) Like a bird flying in the air.
Someone walking in slow motion.
Was not exactly pop music, you could dance to it in slow motion.
Quite calm. Drums playing.

15) I like it a lot. Enjoyable, sad, because it describes something like, the boyfriend left you.
Drums, and keyboard, guitar playing. Much rhythm.
Nice to sit down and listen to it.

RESPONSES TO MUSICAL EXTRACTS CLASSIFIED UNDER THE EXPRESSION STAGE (CUMULATIVE)

1) Happy and very bouncy, one could dance to it.
It repeated itself like the other one, but in different way, sometimes it was high and sometimes it was low.
Nice to listen to.

2) Sounded happier because it has a base made by

the cellos, and the violins went high. They played different melodies, because the cellos played quite low the violins played high notes. It sounded like someone was being chased.

3) The quick bit sounded like steps of a ballet dancing. A bit of it was calm and a bit was loud.
Like someone running.
The louder bits made me think of wind clashing in the trees.

4) Quite lively, I could hear a plucking rhythm, and I could hear a beat and towards the end it gets slightly faster.
It move up and down the pitch, and you could go up and dance, quick beat, like running.

5) It was 'wriski', and I imagine someone playing the double bass, and their fingers going up and down.
You could hear the beat, like the sea smashing on the rock.
Quick rhythm, one could dance to it, the tone was loud. I could imagine a big orchestra playing to it.
People galloping everywhere, fingers going up and down.

6) Violins playing very fast, not dramatic like no.8. Other violins playing lower in the background. It was a fast music made for a flying scene. It could be used in a war scene, because the high violin makes it sound a bit dramatic like something is happening.

7) Lively, and it gets louder and quieter and sort of like jumpy music, and you could imagine people playing the piano, dancing to it, for a play.
It got louder and quieter, and I thought it was like happy, running music.

8) It is not very fast, suitable for 'wind on the willows'.
Mainly string instruments.
The bass part goes like ticking very quickly, and it is kind of spring time.
Sort of harmony, because the lower part fits very well with the upper part.

9) Like soldiers going up to fight a battle on medieval times. Very majestic, strong, because of the way the violins play, and the strings instruments are playing, make it very strong. Could be describe a battle.
It is not energetic, very slow and steady.

10) Reminds me of historic stories that you see on TV, someone running with good news that the king came back from the holy crusades, and they running to tell everybody and it is really good news.

Very fast, extremely fast. I don't think it could have been described as someone running away, because in the middle of the music it goes kind of happy tone.

String instruments, very hard to play because it is so quick, and there are lots of notes to fit in, up and down.

11) It is quite loud and fast, which makes it quite jumpy. It is a nice tune. It makes you want to dance, enjoy yourself, because the way it is presented, so loud, and the tune the way it went quite jumpy. If you are down it makes you happy.

It is not the same as the first one, and the difference is that this is loud, and it was played by different instruments.

It is lively, I enjoy it.

12) It is quite runny. In a lot of films if they have the running in slow motion, they have music like that, it is quite slow, but in another way it is quite fast.

It keeps like repeating itself, I liked it. It is a bit like the other 2 tunes but it is different from them in the way it is presented. The first tune is lazy, the second one is lively, and this one is like of slow motion.

13) The music is lively again, but different from the first one. Like ballet music, because it had more of the jumpy tune than the lively one. When I used to go to ballet they used to have music like that, and we used to watch older students doing jumping. The motion of music and the motion of ballet seems to go together.
It is fast and jumpy, but not like the other one. This one is more relaxing. The other one was like pop music but this one is more a relaxing tune.
This one gets you out to jump and the other one, the pop, get you out to dance.

14) It is jumpy, but in a different way then the other one. This is more sadder than the first one, it got a sad sort of tune. This is a more demanding tune than the first one.
This tune is sad because of the way the violins play. The first one had a light tune but this one had a lot of bass. The music got louder sometimes, and it is not light, is more bass

music.

15) This one is like a ballet music, but more relax. With this music you can sit down and listen to and relax, and you may fall asleep, but with the other ones you could not. It shows the relaxing mood.
When the tune went up it became quite lively, but it did have the same tune going over and over. It was not as lively as the other 2.

RESPONSES TO MUSICAL EXTRACTS CLASSIFIED UNDER THE FORM STAGE (CUMULATIVE)

1) It was quite regular all the way through. It is not repeated. The sounds are not in patterns, but just one basic sound.
The left hand is in a regular pattern. I found it easier to listen to the left hand.
The dynamics, the crescendo, it gets loud and quiet and you do not expect it. There are some patterns that follow and then it changes, but it is quite similar.

2) The emotions changed. It started off soft, and the violins playing high noted and than cellos and double basses came in repeated and went

much lower and got very loud and emphasised it and finally it changed.
Easy to listen to it.
Classical, it is not rock. It is soft like Mozart and beethoven. String orchestra playing.

3) It sounded like it was going from sad to happy, because it was quite slow in the beginning and it became faster and louder.
It gave the effect of someone explaining something when it became louder, as if everything is going to be alright later. It helps regain happiness.

4) The bass started, and the first and second violins came in after a couple of bars, playing different notes, and there was a gap in the middle, and later kind of gather the pace slowly, and starting the way down.
Kind of music you get in old films, like someone running.

5) Started off with the basses, cellos, and violins, and they were playing low notes and very fast (semiquavers), and the cellos come right up after couple of notes getting high in pitch, and the violins come in playing fast notes.

It sounds like music from classical movies when someone is going up marble steps.

6) The way the bass started in the high made it sound dramatic, like someone was desperately trying to run away from something. I could imagine an opera someone running away making it sound very dramatic, because of the loud and the quiet differences, and the speed (tempo) that make it sound like that.
The loudness the way it goes loud and quiet, the speed that went for a long period of time and then fast and high notes which added to the dramaticism.

7) It is very fast. It is full of different parts of music. While one goes on there are others on top of that. It makes you feel the player of the music. It looks like the person is in a rush to do it.
Very rushy, and then it got very loud in the middle, and then it went back to the first part. The beat went high and low, and above that there was a tune, as though a person was in a rush to do things.

8) It was played in a medium speed, because there were a lot of long notes, that made it sound

slower. Started off with the string instruments, playing low beats (3), then a higher instrument joint in with the main tune, and a cello and double bass doing the lower part, like an echo. As the tune went on it got louder, and more instruments joint in, and at the end they died away. It was played in a major key. Sounded like an old dance, and I think there were 4 beats in the bar.

9) It was quite slow, 2 beats in a bar, and started with a low instrument which played in it, and carried on through the whole piece, playing 2 beats, which were not the same notes, quite jumpy. On the top of this there were high string instruments playing the main tune, and they were very smooth, and there are quite a few running bits, and the notes were 'slowish'. The whole tune is quite quiet, and it sounded like a very slow water running. Quite sleepy and peaceful.

10) Very fast, played on the piano. Started with the lower part, jumping around, playing quite rhythmic notes in the beginning. Then the higher part joint in and they were both very jumping around a lot. The higher part had sometimes small chords, or two notes playing at

once, and it got louder about twice in the piece, but very loud and fast pushing upwards, and then it died down, and it got faster again. At the end it got slightly slower.

11) Very dramatic, very loud and low beat chords and there were strings playing over the top, and playing very down the scale (minor scale). It started very high and shrilled, all very loud and then they went down, then there was a short gap, and then they carried on going down lower. Then they started again on a different key and then higher and went down all chords, and it was quite slow and very dramatic.

12) Very fast, and there was a deep cello and bass playing very low notes at the beginning, and very fast, few notes up and down the scale, and got louder until it reached very high notes when the violin and high strings joint in, and they played the same sort of tune, very fast. It stayed like that, and then latter it got louder.

13) It was very fast, and again it was played by the string section, energetic and lively. The violin has mainly the melody, whereas the other string section got more the accompaniment.

Reminds me o a chase, something fast. Quite powerful, and towards the end the instruments get to play together, in contrast from the beginning. In the end there is more harmony.

14) It is a very fast music played by strings quartet. One of the higher violins was taken the tune, and it was very busy at the bottom, which was played by the cellos. It was a kind of repeated melody, and got higher and higher, as if it was building up something. Higher tunes on the top, very fast music. Happy music.

15) Strings. Started off very muffled, with the deep instruments, and then it went on crescendo and the tune became more clear with the high instruments on top.
Started off sad and then it got happier when the lighter instruments came in, and they were playing fast. All of a sudden there was a change from low and sad, to loud and happy.

APPENDIX 16

NUMERICAL TABLE: SEMI-STRUCTURED INTERVIEW - ENGLISH STUDY

STUDENT	MATERIALS	EXPRESSION	FORM	CUMULAT. STATEMS.
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